

Product code	Description
<b>102034 Kit</b>	<b>COLORTEC E-6 3-Bath Kit for 5L for rotary development</b>

## Components:

102034	COLORTEC E-6 3-Bad
102034 Part 1	COLORTEC E-6 Dreibad Farbentwickler CD Part 1
102034 Part 2	COLORTEC E-6 3-Bad Colour Developer CD- Part 2
102034 BX-P1	COLORTEC C-41/ E-6 Negativ Kit Rapid BX-Part 1
102034 BX-P2	COLORTEC C-41/E-6 Negativ Kit Bleichfixierbad BX Part 2
102034 Stab	COLORTEC E-6 3-BAD KIT STAB Stabilizer; Stabi + Netzmittelbad

## Safety data sheet according to 1907/2006/EC, Article 31

Printing date 07.07.2014

version no: 1

Revision: 07.07.2014

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

- . **1.1 Product identifier**
- . **Trade name:** COLORTEC E-6 3-Bath Firstdeveloper
- . **Article number:** 102034, Erstentwickler, 102031
- . **1.2 Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- . **Application of the substance / the mixture** Developer for photographic use
- . **1.3 Details of the supplier of the safety data sheet**
- . **Manufacturer/Supplier:**  
TETENAL Europe GmbH  
Schützenwall 31-35  
D-22844 Norderstedt / Germany  
Phone: ++49 (0) 40 521 45-0; Fax: +49 (0) 40-52145-296  
www.tetenal.com; E-Mail: info@tetenal.com
- TETENAL Ltd.,  
2 Meridian West, Meridian Business Park, Leicester LE19 1WX  
Phone: 0116 - 289 3644; E-Mail: uk@tetenal.com; www.tetenaluk.com
- . **Further information obtainable from:** Department environment and safety. E-Mail: info@tetenal.com
- . **1.4 Emergency telephone number:** Poison Information Centre Berlin (Germany): +49 (0) 30 - 30686 790

### SECTION 2: Hazards identification

- . **2.1 Classification of the substance or mixture**
- . **Classification according to Regulation (EC) No 1272/2008**



GHS07

- Eye Irrit. 2 H319 Causes serious eye irritation.
- Skin Sens. 1B H317 May cause an allergic skin reaction.

- . **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**



Xi; Sensitising

- R43: May cause sensitisation by skin contact.
- . **Information concerning particular hazards for human and environment:**  
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
- . **Classification system:**  
The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

- . **2.2 Label elements**

- . **Labelling according to EU guidelines:**  
The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.
- . **Code letter and hazard designation of product:**



Xi Irritant

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**. Hazard-determining components of labelling:**

potassium 2,5-dihydroxybenzenesulphonate

**. Risk phrases:**

43 May cause sensitisation by skin contact.

**. Safety phrases:**

2 Keep out of the reach of children.

24 Avoid contact with skin.

37 Wear suitable gloves.












46 If swallowed, seek medical advice immediately and show this container or label.

56 Dispose of this material and its container to hazardous or special waste collection point.

**. 2.3 Other hazards****. Results of PBT and vPvB assessment****. PBT:** Not applicable.**. vPvB:** Not applicable.

### SECTION 3: Composition/information on ingredients

**. 3.2 Chemical characterization: Mixtures****. Description:** Mixture of substances listed below and with nonhazardous additions.**. Dangerous components:**

CAS: 21799-87-1 EINECS: 244-584-7	potassium 2,5-dihydroxybenzenesulphonate  Xi R36/37/38  Eye Irrit. 2, H319; Skin Sens. 1B, H317	5-10%
CAS: 584-08-7 EINECS: 209-529-3 Reg.nr.: 01-2119532646-36	potassium carbonate  Xi R36/38  Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	5-10%
CAS: 111-46-6 EINECS: 203-872-2 Index number: 603-140-00-6	diethylene glycol  Xn R22  Acute Tox. 4, H302	5-10%
CAS: 13047-13-7 EINECS: 235-920-3	4-(hydroxymethyl)-4-methyl-1-phenylpyrazolidin-3-one (HMP)  Xn R22;  Xi R43;  N R51/53  Aquatic Chronic 2, H411;  Acute Tox. 4, H302; Skin Sens. 1, H317	<1%

**. Additional information:** For the wording of the listed risk phrases refer to section 16.

### SECTION 4: First aid measures

**. 4.1 Description of first aid measures****. After inhalation:** Supply fresh air and to be sure call for a doctor.**. After skin contact:** Immediately wash with water and soap and rinse thoroughly.**. After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.**. After swallowing:** If symptoms persist consult doctor.**. 4.2 Most important symptoms and effects, both acute and delayed**

No further relevant information available.

**. 4.3 Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

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### SECTION 5: Firefighting measures

- . **5.1 Extinguishing media**
- . **Suitable extinguishing agents:**  
CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- . **5.2 Special hazards arising from the substance or mixture** No further relevant information available.
- . **5.3 Advice for firefighters**
- . **Protective equipment:** No special measures required.

### SECTION 6: Accidental release measures

- . **6.1 Personal precautions, protective equipment and emergency procedures** Ensure adequate ventilation
- . **6.2 Environmental precautions:**  
Dilute with plenty of water.  
Do not allow to enter sewers/ surface or ground water.
- . **6.3 Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Ensure adequate ventilation.
- . **6.4 Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

### SECTION 7: Handling and storage

- . **7.1 Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of aerosols.
- . **Information about fire - and explosion protection:** No special measures required.
- . **7.2 Conditions for safe storage, including any incompatibilities**
- . **Storage:**
- . **Requirements to be met by storerooms and receptacles:** No special requirements.
- . **Information about storage in one common storage facility:** Store away from foodstuffs.
- . **Further information about storage conditions:**  
Store in cool, dry conditions in well sealed receptacles.  
Protect from heat and direct sunlight.  
Store under lock and key and out of the reach of children.  
Recommended storage temperature: 5-25 °C  
Protect from exposure to the light.
- . **7.3 Specific end use(s)** No further relevant information available.

### SECTION 8: Exposure controls/personal protection

- . **Additional information about design of technical facilities:** No further data; see item 7.

#### . 8.1 Control parameters

- . **Ingredients with limit values that require monitoring at the workplace:**

<b>111-46-6 diethylene glycol (5-10%)</b>
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WEL	Long-term value: 101 mg/m <sup>3</sup> , 23 ppm
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- . **Additional information:** The lists valid during the making were used as basis.

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#### 8.2 Exposure controls

##### Personal protective equipment:

##### General protective and hygienic measures:

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

##### Respiratory protection: Not required.

##### Protection of hands:



Protective gloves

Impervious gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

##### Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Butyl rubber, BR

Nitrile rubber, NBR

Neoprene gloves

##### Penetration time of glove material

Glove material	breakthrough-time	layer thickness
Butyl rubber:	>480 min	≥0,4mm
Nitrile rubber:	>480 min	≥0,38mm
Neoprene:	>240 min	≥0,65mm

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

##### Eye protection: Safety glasses

##### Body protection: Protective work clothing

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### General Information

##### Appearance:

Form: Fluid

Colour: Light yellow

Odour: Recognizable

pH-value at 20 °C: 9.9

#### Change in condition

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: &gt; 100 °C

Flash point: Not applicable.

Ignition temperature: 230 °C

Self-igniting: Product is not selfigniting.

Danger of explosion: Product does not present an explosion hazard.

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. Vapour pressure at 20 °C:	23 hPa
. Density at 20 °C:	1.278 g/cm <sup>3</sup>
. Solubility in / Miscibility with water:	Fully miscible.
. Solvent content:	
Organic solvents:	5.2 %
Water:	>61 %
. 9.2 Other information	No further relevant information available.

### SECTION 10: Stability and reactivity

- . 10.1 Reactivity
- . 10.2 Chemical stability
- . Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- . 10.3 Possibility of hazardous reactions No dangerous reactions known.
- . 10.4 Conditions to avoid No further relevant information available.
- . 10.5 Incompatible materials: No further relevant information available.
- . 10.6 Hazardous decomposition products: Irritant gases/vapours

### SECTION 11: Toxicological information

- . 11.1 Information on toxicological effects
- . Acute toxicity:
- . Primary irritant effect:
- . on the skin: No irritant effect.
- . on the eye: No irritating effect.
- . Sensitization: Sensitization possible through skin contact.
- . Additional toxicological information:
- The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
- Irritant

### SECTION 12: Ecological information

- . 12.1 Toxicity
- . Aquatic toxicity: No further relevant information available.
- . 12.2 Persistence and degradability No further relevant information available.
- . 12.3 Bioaccumulative potential No further relevant information available.
- . 12.4 Mobility in soil No further relevant information available.
- . Additional ecological information:
- . General notes:
- Do not allow product to reach ground water, water course or sewage system.
- Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
- Danger to drinking water if even small quantities leak into the ground.
- . 12.5 Results of PBT and vPvB assessment
- . PBT: Not applicable.
- . vPvB: Not applicable.
- . 12.6 Other adverse effects No further relevant information available.

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### SECTION 13: Disposal considerations

#### . 13.1 Waste treatment methods

##### . Recommendation

Must not be disposed together with household garbage. Do not allow product to reach sewage system. Rinse out concentrate residues with some of the water used for the solution and add to the solution in question. Return the containers for recycling without concentrate residues. For further information on waste management techniques for photographic chemicals please contact the local environmental authorities.

##### . European waste catalogue

09 01 01*	water-based developer and activator solutions
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##### . Uncleaned packaging:

. **Recommendation:** Disposal must be made according to official regulations.

. **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

### SECTION 14: Transport information

#### . 14.1 UN-Number

. ADR, ADN, IMDG, IATA	Void
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#### . 14.2 UN proper shipping name

. ADR	Void
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. ADN, IMDG, IATA	Void
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#### . 14.3 Transport hazard class(es)

. ADR, ADN, IMDG, IATA	
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. Class	Void
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#### . 14.4 Packing group

. ADR, IMDG, IATA	Void
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#### . 14.5 Environmental hazards:

. Marine pollutant:	No
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#### . 14.6 Special precautions for user

Not applicable.
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#### . 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.
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#### . UN "Model Regulation":

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### SECTION 15: Regulatory information

. **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

#### . Relevant phrases

H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.

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H335 May cause respiratory irritation.  
 H411 Toxic to aquatic life with long lasting effects.  
 R22 Harmful if swallowed.  
 R36/37/38 Irritating to eyes, respiratory system and skin.  
 R36/38 Irritating to eyes and skin.  
 R43 May cause sensitisation by skin contact.  
 R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

. **Department issuing MSDS:** Department product safety

. **Contact:** e-mail: sida@tetenal.com

. **Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organization

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

Acute Tox. 4: Acute toxicity, Hazard Category 4

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2

Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

Skin Sens. 1B: Sensitisation - Skin, Hazard Category 1B

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2

. **\* Data compared to the previous version altered.**

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version no: 1

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#### SECTION 1: Identification of the substance/mixture and of the company/undertaking

##### 1.1 Product identifier

Trade name: **COLORTEC E-6 3-Bath Colour-Developer CD Part 1**

Article number: 102034 Part 1, 102031 Part 1, 44275 Part 1

##### 1.2 Relevant identified uses of the substance or mixture and uses advised against

No further relevant information available.

Application of the substance / the mixture Developer for photographic use

##### 1.3 Details of the supplier of the safety data sheet

###### Manufacturer/Supplier:

TETENAL Europe GmbH

Schützenwall 31-35

D-22844 Norderstedt / Germany

Phone: ++49 (0) 40 521 45-0; Fax: +49 (0) 40-52145-296

www.tetenal.com; E-Mail: info@tetenal.com

TETENAL Ltd.,

2 Meridian West, Meridian Business Park, Leicester LE19 1WX

Phone: 0116 - 289 3644; E-Mail: uk@tetenal.com; www.tetenaluk.com

Further information obtainable from: Department environment and safety. E-Mail: info@tetenal.com

1.4 Emergency telephone number: Poison Information Centre Berlin (Germany): +49 (0) 30 - 30686 790

#### SECTION 2: Hazards identification

##### 2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008



GHS05

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC



Xi; Irritant

R36/38: Irritating to eyes and skin.

##### Information concerning particular hazards for human and environment:

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

##### Classification system:

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

##### 2.2 Label elements

###### Labelling according to EU guidelines:

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.

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## . Code letter and hazard designation of product:



Xi Irritant

## . Risk phrases:

36/38 Irritating to eyes and skin.

## . Safety phrases:

2 Keep out of the reach of children.

29 Do not empty into drains.

46 If swallowed, seek medical advice immediately and show this container or label.

## . 2.3 Other hazards

## . Results of PBT and vPvB assessment

. PBT: Not applicable.

. vPvB: Not applicable.

### SECTION 3: Composition/information on ingredients

## . 3.2 Chemical characterization: Mixtures

. Description: Mixture of substances listed below and with nonhazardous additions.

## . Dangerous components:

CAS: 7778-53-2 EINECS: 213-907-1	Tripotassium orthophosphate Xi R36/37/38 Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	10-25%
CAS: 1310-73-2 EINECS: 215-185-5 Index number: 011-002-00-6 Reg.nr.: 01-2119457892-27	sodium hydroxide (caustic soda) C R35 Met. Corr.1, H290; Skin Corr. 1A, H314	0.5-2%

. Additional information: For the wording of the listed risk phrases refer to section 16.

### SECTION 4: First aid measures

## . 4.1 Description of first aid measures

. General information: Immediately remove any clothing/shoes soiled by the product.

. After inhalation: In case of unconsciousness place patient stably in side position for transportation.

. After skin contact: Immediately wash with water and soap and rinse thoroughly.

## . After eye contact:

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

## . After swallowing:

Induce vomiting and call for medical help.

Rinse out mouth and then drink plenty of water.

If symptoms persist consult doctor.

## . 4.2 Most important symptoms and effects, both acute and delayed

No further relevant information available.

## . 4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

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### SECTION 5: Firefighting measures

- . **5.1 Extinguishing media**
- . **Suitable extinguishing agents:**  
CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- . **5.2 Special hazards arising from the substance or mixture**  
Under certain fire conditions, traces of other toxic gases cannot be excluded.
- . **5.3 Advice for firefighters**
- . **Protective equipment:** No special measures required.

### SECTION 6: Accidental release measures

- . **6.1 Personal precautions, protective equipment and emergency procedures** Ensure adequate ventilation
- . **6.2 Environmental precautions:**  
Dilute with plenty of water.  
Do not allow to enter sewers/ surface or ground water.
- . **6.3 Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Pick up mechanically.
- . **6.4 Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

### SECTION 7: Handling and storage

- . **7.1 Precautions for safe handling** Prevent formation of aerosols.
- . **Information about fire - and explosion protection:** No special measures required.
- . **7.2 Conditions for safe storage, including any incompatibilities**
- . **Storage:**
- . **Requirements to be met by storerooms and receptacles:** No special requirements.
- . **Information about storage in one common storage facility:**  
Store away from foodstuffs.  
Do not store together with acids.  
Store away from oxidizing agents.
- . **Further information about storage conditions:**  
Keep container tightly sealed.  
Store in cool, dry conditions in well sealed receptacles.  
Protect from heat and direct sunlight.  
Store under lock and key and out of the reach of children.  
Recommended storage temperature: 5-25 °C  
Protect from exposure to the light.
- . **7.3 Specific end use(s)** No further relevant information available.

### SECTION 8: Exposure controls/personal protection

- . **Additional information about design of technical facilities:** No further data; see item 7.
- . **8.1 Control parameters**

. <b>Ingredients with limit values that require monitoring at the workplace:</b>	
<b>1310-73-2 sodium hydroxide (caustic soda) (&lt;2.5%)</b>	
WEL	Short-term value: 2 mg/m <sup>3</sup>

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. **Additional information:** The lists valid during the making were used as basis.. **8.2 Exposure controls**. **Personal protective equipment:**. **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes and skin.

. **Respiratory protection:** Not necessary if room is well-ventilated.. **Protection of hands:**

Protective gloves

Impervious gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

. **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Butyl rubber, BR

Nitrile rubber, NBR

Neoprene gloves

. **Penetration time of glove material**

Glove material	breakthrough-time	layer thickness
Butyl rubber:	>480 min	≥0,4mm
Nitrile rubber:	>480 min	≥0,38mm
Neoprene:	>240 min	≥0,65mm

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

. **Eye protection:**

Tightly sealed goggles

. **Body protection:** Protective work clothing

## SECTION 9: Physical and chemical properties

. **9.1 Information on basic physical and chemical properties**. **General Information**. **Appearance:**

Form: Fluid

Colour: Light yellow

. **Odour:** Recognizable. **pH-value at 20 °C:** >13

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. **Change in condition****Melting point/Melting range:** Undetermined.**Boiling point/Boiling range:** > 100 °C. **Flash point:** Not applicable.. **Self-igniting:** Product is not selfigniting.. **Danger of explosion:** Product does not present an explosion hazard.. **Vapour pressure at 20 °C:** 23 hPa. **Density at 20 °C:** 1.157 g/cm<sup>3</sup>. **Solubility in / Miscibility with water:** Fully miscible.. **Solvent content:****Organic solvents:** 0.0 %**Water:** >84 %. **9.2 Other information** No further relevant information available.

## SECTION 10: Stability and reactivity

. **10.1 Reactivity**. **10.2 Chemical stability**. **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.. **10.3 Possibility of hazardous reactions** Reacts with acids, alkalis and oxidizing agents.. **10.4 Conditions to avoid** No further relevant information available.. **10.5 Incompatible materials:** No further relevant information available.. **10.6 Hazardous decomposition products:** Irritant gases/vapours

## SECTION 11: Toxicological information

. **11.1 Information on toxicological effects**. **Acute toxicity:**. **LD/LC50 values relevant for classification:****1310-73-2 sodium hydroxide (caustic soda)**

Oral LD50 &gt;2000 mg/kg (rat)

. **Primary irritant effect:**. **on the skin:** Irritant to skin and mucous membranes.. **on the eye:** Irritating effect.. **Sensitization:** No sensitizing effects known.. **Additional toxicological information:**

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

Irritant

The preparation is "irritant". J.R. Young, M.J. How, A.P. Walker and W.M.H. Worth (1988): Classification as corrosive or irritant to skin of preparations containing acidic or alkaline substances, without testing on animals. Toxic. in Vitro, Bd.2, Nr.1, 1988, S.19-26].

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## SECTION 12: Ecological information

### . 12.1 Toxicity

#### . Aquatic toxicity:

#### 1310-73-2 sodium hydroxide (caustic soda)

EC50 24h: 76 mg/l (daphnia magna (Großer Wasserfloh))

LC50 48h: 99 mg/L (Lepomis macrochirus)

96h: 45.4 mg/L (Oncorhynchus mykiss)

. 12.2 Persistence and degradability No further relevant information available.

. 12.3 Bioaccumulative potential No further relevant information available.

. 12.4 Mobility in soil No further relevant information available.

#### . Additional ecological information:

#### . General notes:

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

Do not allow product to reach ground water, water course or sewage system.

#### . 12.5 Results of PBT and vPvB assessment

. PBT: Not applicable.

. vPvB: Not applicable.

. 12.6 Other adverse effects No further relevant information available.

## SECTION 13: Disposal considerations

### . 13.1 Waste treatment methods

#### . Recommendation

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

#### . European waste catalogue

09 01 01 water-based developer and activator solutions

#### . Uncleaned packaging:

. Recommendation: Disposal must be made according to official regulations.

. Recommended cleansing agents: Water, if necessary together with cleansing agents.

## SECTION 14: Transport information

### . 14.1 UN-Number

. ADR, ADN, IMDG, IATA

Void

### . 14.2 UN proper shipping name

. ADR, ADN, IMDG, IATA

Void

### . 14.3 Transport hazard class(es)

. ADR, ADN, IMDG, IATA

. Class

Void

### . 14.4 Packing group

. ADR, IMDG, IATA

Void

### . 14.5 Environmental hazards:

. Marine pollutant:

No

### . 14.6 Special precautions for user

Not applicable.

(Contd. on page 7)

-EN-

## Safety data sheet

### according to 1907/2006/EC, Article 31

Printing date 07.07.2014

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**Trade name: COLORTEC E-6 3-Bath Colour-Developer CD Part 1**

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- |  |                 |
|--|-----------------|
| . 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |
| . UN "Model Regulation":   | -               |

### SECTION 15: Regulatory information

- . 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

### SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

. **Relevant phrases**

- |           |  |
|-----------|--|
| H290      | May be corrosive to metals.                      |
| H314      | Causes severe skin burns and eye damage.         |
| H315      | Causes skin irritation.                          |
| H319      | Causes serious eye irritation.                   |
| H335      | May cause respiratory irritation.                |
| .....     |  |
| R35       | Causes severe burns.                             |
| R36/37/38 | Irritating to eyes, respiratory system and skin. |

- . **Department issuing MSDS:** Department product safety

- . **Contact:** e-mail: sida@tetenal.com

. **Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)  
 ICAO: International Civil Aviation Organization  
 ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)  
 IMDG: International Maritime Code for Dangerous Goods  
 IATA: International Air Transport Association  
 GHS: Globally Harmonized System of Classification and Labelling of Chemicals  
 EINECS: European Inventory of Existing Commercial Chemical Substances  
 ELINCS: European List of Notified Chemical Substances  
 CAS: Chemical Abstracts Service (division of the American Chemical Society)  
 LC50: Lethal concentration, 50 percent  
 LD50: Lethal dose, 50 percent  
 Met. Corr. 1: Corrosive to metals, Hazard Category 1  
 Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A  
 Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2  
 Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1  
 Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2  
 STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

- . **\* Data compared to the previous version altered.**

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## Safety data sheet

### according to 1907/2006/EC, Article 31

Printing date 07.07.2014

version no: 1

Revision: 07.07.2014

#### SECTION 1: Identification of the substance/mixture and of the company/undertaking

##### 1.1 Product identifier

Trade name: **COLORTEC E-6 3-bath Colour Developer CD-Part 2**

Article number: 102034 Part 2, 102031 Part 2, 44276 Part 2

##### 1.2 Relevant identified uses of the substance or mixture and uses advised against

No further relevant information available.

Application of the substance / the mixture Developer for photographic use

##### 1.3 Details of the supplier of the safety data sheet

###### Manufacturer/Supplier:

TETENAL Europe GmbH

Schützenwall 31-35

D-22844 Norderstedt / Germany

Phone: ++49 (0) 40 521 45-0; Fax: +49 (0) 40-52145-296

www.tetenal.com; E-Mail: info@tetenal.com

TETENAL Ltd.,

2 Meridian West, Meridian Business Park, Leicester LE19 1WX

Phone: 0116 - 289 3644; E-Mail: uk@tetenal.com; www.tetenaluk.com

Further information obtainable from: Department environment and safety. E-Mail: info@tetenal.com

1.4 Emergency telephone number: Poison Information Centre Berlin (Germany): +49 (0) 30 - 30686 790

#### SECTION 2: Hazards identification

##### 2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008



GHS09

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.



GHS07

Skin Sens. 1 H317 May cause an allergic skin reaction.

H401 Toxic to aquatic life.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC



Xi; Sensitising

R43: May cause sensitisation by skin contact.



N; Dangerous for the environment

R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

##### Information concerning particular hazards for human and environment:

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

##### Classification system:

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

(Contd. on page 2)

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## Safety data sheet

### according to 1907/2006/EC, Article 31

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version no: 1

Revision: 07.07.2014

Trade name: COLORTEC E-6 3-bath Colour Developer CD-Part 2

(Contd. of page 1)

#### 2.2 Label elements

##### Labelling according to EU guidelines:

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.

##### Code letter and hazard designation of product:



Xi Irritant

N Dangerous for the environment

##### Hazard-determining components of labelling:

N-(2-(4-amino-N-ethyl-m-toluidino)ethyl)methanesulphonamide sesquisulphate (CD-3)

##### Risk phrases:

43 May cause sensitisation by skin contact.

51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

##### Safety phrases:

2 Keep out of the reach of children.

24 Avoid contact with skin.

37 Wear suitable gloves.

61 Avoid release to the environment. Refer to special instructions/safety data sheets.

#### 2.3 Other hazards

##### Results of PBT and vPvB assessment

**PBT:** Not applicable.

**vPvB:** Not applicable.

## SECTION 3: Composition/information on ingredients

#### 3.2 Chemical characterization: Mixtures

**Description:** Mixture of substances listed below and with nonhazardous additions.

##### Dangerous components:

CAS: 25646-71-3	N-(2-(4-amino-N-ethyl-m-toluidino)ethyl)methanesulphonamide	5-10%
EINECS: 247-161-5	sesquisulphate (CD-3)	
Index number: 612-134-00-2	Xn R22;  Xi R43;  N R50/53	
	Aquatic Chronic 1, H410;  Acute Tox. 4, H302; Skin Sens. 1, H317	

**Additional information:** For the wording of the listed risk phrases refer to section 16.

## SECTION 4: First aid measures

#### 4.1 Description of first aid measures

**After inhalation:** Supply fresh air and to be sure call for a doctor.

**After skin contact:** Immediately wash with water and soap and rinse thoroughly.

**After eye contact:** Rinse opened eye for several (15 min) under running water.

**After swallowing:** If symptoms persist consult doctor.

#### 4.2 Most important symptoms and effects, both acute and delayed

No further relevant information available.

#### 4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

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(Contd. on page 3)

## Safety data sheet according to 1907/2006/EC, Article 31

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Trade name: COLORTEC E-6 3-bath Colour Developer CD-Part 2

(Contd. of page 2)

### SECTION 5: Firefighting measures

- . **5.1 Extinguishing media**
- . **Suitable extinguishing agents:**  
CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- . **5.2 Special hazards arising from the substance or mixture** No further relevant information available.
- . **5.3 Advice for firefighters**
- . **Protective equipment:** No special measures required.

### SECTION 6: Accidental release measures

- . **6.1 Personal precautions, protective equipment and emergency procedures** Ensure adequate ventilation
- . **6.2 Environmental precautions:**  
Do not allow product to reach sewage system or any water course.  
Inform respective authorities in case of seepage into water course or sewage system.  
Dilute with plenty of water.  
Do not allow to enter sewers/ surface or ground water.
- . **6.3 Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Ensure adequate ventilation.
- . **6.4 Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

### SECTION 7: Handling and storage

- . **7.1 Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of aerosols.
- . **Information about fire - and explosion protection:** No special measures required.
- . **7.2 Conditions for safe storage, including any incompatibilities**
- . **Storage:**
- . **Requirements to be met by storerooms and receptacles:** No special requirements.
- . **Information about storage in one common storage facility:** Store away from foodstuffs.
- . **Further information about storage conditions:**  
Protect from heat and direct sunlight.  
Store under lock and key and out of the reach of children.  
Recommended storage temperature: 5-25 °C  
Protect from exposure to the light.
- . **7.3 Specific end use(s)** No further relevant information available.

### SECTION 8: Exposure controls/personal protection

- . **Additional information about design of technical facilities:** No further data; see item 7.
- . **8.1 Control parameters**
- . **Ingredients with limit values that require monitoring at the workplace:**  
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- . **Additional information:** The lists valid during the making were used as basis.

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Trade name: COLORTEC E-6 3-bath Colour Developer CD-Part 2

(Contd. of page 3)

- . **8.2 Exposure controls**
- . **Personal protective equipment:**
- . **General protective and hygienic measures:**
  - Immediately remove all soiled and contaminated clothing
  - Wash hands before breaks and at the end of work.
  - Avoid contact with the skin.
- . **Respiratory protection:** Ensure adequate ventilation
- . **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- . **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Butyl rubber, BR  
Nitrile rubber, NBR  
Neoprene gloves

- . **Penetration time of glove material**

Glove material	breakthrough-time	layer thickness
Butyl rubber:	>480 min	≥0,4mm
Nitrile rubber:	>480 min	≥0,38mm
Neoprene:	>240 min	≥0,65mm

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

- . **Eye protection:** Safety glasses
- . **Body protection:** Protective work clothing

## SECTION 9: Physical and chemical properties

- . **9.1 Information on basic physical and chemical properties**

- . **General Information**

- . **Appearance:**

<b>Form:</b>	Fluid
<b>Colour:</b>	Light yellow
<b>Odour:</b>	Pungent to sulfur dioxide

- . **pH-value at 20 °C:** 2

- . **Change in condition**

**Melting point/Melting range:** Undetermined.  
**Boiling point/Boiling range:** > 100 °C

- . **Flash point:** Not applicable.

- . **Self-igniting:** Product is not selfigniting.

- . **Danger of explosion:** Product does not present an explosion hazard.

- . **Vapour pressure at 20 °C:** 23 hPa

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### according to 1907/2006/EC, Article 31

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Trade name: COLORTEC E-6 3-bath Colour Developer CD-Part 2

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- |   |  |
|---|--|
| . Density at 20 °C:                       | 1.039 g/cm <sup>3</sup>                    |
| . Solubility in / Miscibility with water: | Fully miscible.                            |
| . Solvent content:                        |  |
| Organic solvents:                         | 0.0 %                                      |
| Water:                                    | >89 %                                      |
| . 9.2 Other information                   | No further relevant information available. |

### SECTION 10: Stability and reactivity

- . 10.1 Reactivity
- . 10.2 Chemical stability
- . Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- . 10.3 Possibility of hazardous reactions No dangerous reactions known.
- . 10.4 Conditions to avoid No further relevant information available.
- . 10.5 Incompatible materials: No further relevant information available.
- . 10.6 Hazardous decomposition products: Irritant gases/vapours

### SECTION 11: Toxicological information

- . 11.1 Information on toxicological effects
- . Acute toxicity:

. LD/LC50 values relevant for classification:
---

25646-71-3 N-(2-(4-amino-N-ethyl-m-toluidino)ethyl)methanesulphonamide sesquisulphate (CD-3)
--

Oral	LD50	931 mg/kg (rat)
------	------	-----------------

- . Primary irritant effect:
- . on the skin: No irritant effect.
- . on the eye: No irritating effect.
- . Sensitization: Sensitization possible through skin contact.
- . Additional toxicological information:  
 The preparation is "not irritant", because the puffer capacity (Young, How, Walker, Worth. Classification as Irritant of preparations containing acidic or alkaline substances without testing on animals. Toxicology in Vitro, 2, No. 1, pages 9-26, 1988,  
 The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:  
 Irritant

### SECTION 12: Ecological information

- . 12.1 Toxicity

. Aquatic toxicity:
---------------------

25646-71-3 N-(2-(4-amino-N-ethyl-m-toluidino)ethyl)methanesulphonamide sesquisulphate (CD-3)
--

LC50	96h: 1.8 mg/L (fat)
------	---------------------

- . 12.2 Persistence and degradability No further relevant information available.
- . 12.3 Bioaccumulative potential No further relevant information available.
- . 12.4 Mobility in soil No further relevant information available.
- . Ecotoxicological effects:
- . Remark: Toxic for fish

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Trade name: COLORTEC E-6 3-bath Colour Developer CD-Part 2

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. **Additional ecological information:**. **General notes:**

Do not allow product to reach ground water, water course or sewage system, even in small quantities.

Also poisonous for fish and plankton in water bodies.

Toxic for aquatic organisms

Rinse off of bigger amounts into drains or the aquatic environment may lead to decreased pH-values. A low pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably increased, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.

Water hazard class 3 (German Regulation) (Self-assessment): extremely hazardous for water

Danger to drinking water if even extremely small quantities leak into the ground.

. **12.5 Results of PBT and vPvB assessment**. **PBT:** Not applicable.. **vPvB:** Not applicable.. **12.6 Other adverse effects** No further relevant information available.\* **SECTION 13: Disposal considerations**. **13.1 Waste treatment methods**. **Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

. **European waste catalogue**

09 01 01 water-based developer and activator solutions

. **Uncleaned packaging:**. **Recommendation:** Disposal must be made according to official regulations.. **Recommended cleansing agents:** Water, if necessary together with cleansing agents.\* **SECTION 14: Transport information**. **14.1 UN-Number**. **ADR, IMDG, IATA**

UN3082

. **14.2 UN proper shipping name**. **ADR**

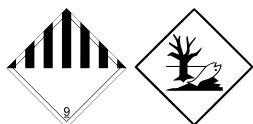
3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (p-Phenylenediamine derivate)

. **IMDG**

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (p-Phenylenediamine derivate CD-3), MARINE POLLUTANT

. **IATA**

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (p-Phenylenediamine derivate CD-3)

. **14.3 Transport hazard class(es)**. **ADR**. **Class**

9 (M6) Miscellaneous dangerous substances and articles.

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## Safety data sheet

### according to 1907/2006/EC, Article 31


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Trade name: COLORTEC E-6 3-bath Colour Developer CD-Part 2

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. Label	9
. IMDG, IATA	
	
. Class	9 Miscellaneous dangerous substances and articles.
. Label	9
. 14.4 Packing group	
. ADR, IMDG, IATA	III
. 14.5 Environmental hazards:	Product contains environmentally hazardous substances: p-Phenylenediamine derivate CD-3
. Marine pollutant:	Yes
. Special marking (ADR):	Symbol (fish and tree)
. Special marking (IATA):	Symbol (fish and tree)
. 14.6 Special precautions for user	Warning: Miscellaneous dangerous substances and articles.
. Danger code (Kemler):	90
. EMS Number:	F-A,S-F
. 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
. Transport/Additional information:	
. ADR	
. Limited quantities (LQ)	5L
. Transport category	3
. Tunnel restriction code	E
. UN "Model Regulation":	UN3082; ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.; 9; III

## SECTION 15: Regulatory information

. 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

## SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

### . Relevant phrases

H302 Harmful if swallowed.

H317 May cause an allergic skin reaction.

H410 Very toxic to aquatic life with long lasting effects.

R22 Harmful if swallowed.

R43 May cause sensitisation by skin contact.

R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

. Department issuing MSDS: Department product safety

. Contact: e-mail: sida@tetenal.com

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**Safety data sheet**  
**according to 1907/2006/EC, Article 31**

Printing date 07.07.2014

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Revision: 07.07.2014

**Trade name: COLORTEC E-6 3-bath Colour Developer CD-Part 2**

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**. Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organization

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Acute Tox. 4: Acute toxicity, Hazard Category 4

Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

: Hazardous to the aquatic environment - AcuteHazard, Category 2

Aquatic Chronic 1: Hazardous to the aquatic environment - Chronic Hazard, Category 1

Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2

**. \* Data compared to the previous version altered.**

— EN —

## Safety data sheet

### according to 1907/2006/EC, Article 31

Printing date 07.07.2014

version no: 1

Revision: 07.07.2014

#### SECTION 1: Identification of the substance/mixture and of the company/undertaking

##### 1.1 Product identifier

**Trade name:** COLORTEC C-41/ E-6 Negativ Kit Rapid BX-Part 1 Bleachfixbath

**Article number:** 102034 BX-P1, 102228 BX-P1, 102226 BX-P1, 44020 BX-P1, 102031 BX-P1

##### 1.2 Relevant identified uses of the substance or mixture and uses advised against

No further relevant information available.

**Application of the substance / the mixture** Bleachfix preparation for photographic use

##### 1.3 Details of the supplier of the safety data sheet

###### Manufacturer/Supplier:

TETENAL Europe GmbH

Schützenwall 31-35

D-22844 Norderstedt / Germany

Phone: ++49 (0) 40 521 45-0; Fax: +49 (0) 40-52145-296

www.tetenal.com; E-Mail: info@tetenal.com

TETENAL Ltd.,

2 Meridian West, Meridian Business Park, Leicester LE19 1WX

Phone: 0116 - 289 3644; E-Mail: uk@tetenal.com; www.tetenaluk.com

**Further information obtainable from:** Department environment and safety. E-Mail: info@tetenal.com

**1.4 Emergency telephone number:** Poison Information Centre Berlin (Germany): +49 (0) 30 - 30686 790

#### SECTION 2: Hazards identification

##### 2.1 Classification of the substance or mixture

###### Classification according to Regulation (EC) No 1272/2008

The product is not classified according to the CLP regulation.

**Classification according to Directive 67/548/EEC or Directive 1999/45/EC** Not applicable.

###### Information concerning particular hazards for human and environment:

The product does not have to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

No hazards to be particularly mentioned. Please note the information of this Material Safety Data Sheet.

###### Classification system:

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

##### 2.2 Label elements

###### Labelling according to EU guidelines:

Observe the general safety regulations when handling chemicals.

The product is not subject to identification regulations under EU Directives and the Ordinance on Hazardous Materials (German GefStoffV).

##### 2.3 Other hazards

###### Results of PBT and vPvB assessment

**PBT:** Not applicable.

**vPvB:** Not applicable.

#### SECTION 3: Composition/information on ingredients

##### 3.2 Chemical characterization: Mixtures

**Description:** Mixture of substances listed below and with nonhazardous additions.

**Dangerous components:** Void

###### Not hazardous components:

CAS: 21265-50-9

EINECS: 244-302-2

Ethylenediaminetetraacetic acid ferric ammonium salt/

Ferriammonium-complex

25-50%

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## Safety data sheet

### according to 1907/2006/EC, Article 31

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Revision: 07.07.2014

**Trade name: COLORTEC C-41/ E-6 Negativ Kit Rapid BX-Part 1 Bleachfixbath**

. **Additional information:** For the wording of the listed risk phrases refer to section 16.

(Contd. of page 1)

#### SECTION 4: First aid measures

- . **4.1 Description of first aid measures**
- . **General information:** Immediately remove any clothing/shoes soiled by the product.
- . **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- . **After skin contact:** Immediately rinse with water.
- . **After eye contact:** Rinse opened eye for several (15 min) under running water.
- . **After swallowing:**  
Rinse out mouth and then drink plenty of water.  
If symptoms persist consult doctor.
- . **4.2 Most important symptoms and effects, both acute and delayed**  
No further relevant information available.
- . **4.3 Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

#### SECTION 5: Firefighting measures

- . **5.1 Extinguishing media**
- . **Suitable extinguishing agents:**  
CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- . **5.2 Special hazards arising from the substance or mixture** No further relevant information available.
- . **5.3 Advice for firefighters**
- . **Protective equipment:** No special measures required.

#### SECTION 6: Accidental release measures

- . **6.1 Personal precautions, protective equipment and emergency procedures** Ensure adequate ventilation
- . **6.2 Environmental precautions:**  
Dilute with plenty of water.  
Do not allow to enter sewers/ surface or ground water.
- . **6.3 Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- . **6.4 Reference to other sections** No dangerous substances are released.

#### SECTION 7: Handling and storage

- . **7.1 Precautions for safe handling** No special measures required.
- . **Information about fire - and explosion protection:** No special measures required.
- . **7.2 Conditions for safe storage, including any incompatibilities**
- . **Storage:**
- . **Requirements to be met by storerooms and receptacles:** No special requirements.
- . **Information about storage in one common storage facility:** Store away from foodstuffs.
- . **Further information about storage conditions:**  
Store under lock and key and out of the reach of children.  
Recommended storage temperature: 5-25 °C
- . **7.3 Specific end use(s)** No further relevant information available.

— EN —

(Contd. on page 3)

## Safety data sheet

### according to 1907/2006/EC, Article 31

Printing date 07.07.2014

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Trade name: COLORTEC C-41/ E-6 Negativ Kit Rapid BX-Part 1 Bleachfixbath

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### SECTION 8: Exposure controls/personal protection

. **Additional information about design of technical facilities:** No further data; see item 7.

. **8.1 Control parameters**

. **Ingredients with limit values that require monitoring at the workplace:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

. **Additional information:** The lists valid during the making were used as basis.

. **8.2 Exposure controls**

. **Personal protective equipment:**

. **General protective and hygienic measures:** Avoid contact with the skin.

. **Respiratory protection:** Not required.

. **Protection of hands:**

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

. **Material of gloves**

Butyl rubber, BR

Nitrile rubber, NBR

Neoprene gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

. **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Glove material	breakthrough-time	layer thickness
Butyl rubber:	>480 min	≥0,4mm
Nitrile rubber:	>480 min	≥0,38mm
Neoprene:	>240 min	≥0,65mm

. **Eye protection:** Safety glasses

. **Body protection:** Protective work clothing

### SECTION 9: Physical and chemical properties

. **9.1 Information on basic physical and chemical properties**

. **General Information**

. **Appearance:**

Form: Fluid

Colour: Dark red

. **Odour:** Odourless

. **pH-value at 20 °C:** 6.8

. **Change in condition**

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: > 100 °C

. **Flash point:** Not applicable.

. **Self-igniting:** Product is not selfigniting.

. **Danger of explosion:** Product does not present an explosion hazard.

. **Vapour pressure at 20 °C:** 23 hPa

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## Safety data sheet

### according to 1907/2006/EC, Article 31

Printing date 07.07.2014

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Trade name: COLORTEC C-41/ E-6 Negativ Kit Rapid BX-Part 1 Bleachfixbath

(Contd. of page 3)

- |   |  |
|---|--|
| . Density at 20 °C:                       | 1.24 g/cm <sup>3</sup>                     |
| . Solubility in / Miscibility with water: | Fully miscible.                            |
| . Solvent content:                        |  |
| Organic solvents:                         | 0.7 %                                      |
| Water:                                    | >59 %                                      |
| . 9.2 Other information                   | No further relevant information available. |

### SECTION 10: Stability and reactivity

- . 10.1 Reactivity
- . 10.2 Chemical stability
- . Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- . 10.3 Possibility of hazardous reactions No dangerous reactions known.
- . 10.4 Conditions to avoid No further relevant information available.
- . 10.5 Incompatible materials: No further relevant information available.
- . 10.6 Hazardous decomposition products: Irritant gases/vapours

### SECTION 11: Toxicological information

- . 11.1 Information on toxicological effects
  - . Acute toxicity:
  - . Primary irritant effect:
  - . on the skin: No irritant effect.
  - . on the eye: No irritating effect.
  - . Sensitization: No sensitizing effects known.
  - . Additional toxicological information:
- The product is not subject to classification according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version.
- When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.

### SECTION 12: Ecological information

- . 12.1 Toxicity
- . Aquatic toxicity: No further relevant information available.
- . 12.2 Persistence and degradability No further relevant information available.
- . 12.3 Bioaccumulative potential No further relevant information available.
- . 12.4 Mobility in soil No further relevant information available.
- . Additional ecological information:
- . General notes: Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
- . 12.5 Results of PBT and vPvB assessment
- . PBT: Not applicable.
- . vPvB: Not applicable.
- . 12.6 Other adverse effects No further relevant information available.

-EN-

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## Safety data sheet

### according to 1907/2006/EC, Article 31

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Trade name: COLORTEC C-41/ E-6 Negativ Kit Rapid BX-Part 1 Bleachfixbath

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### SECTION 13: Disposal considerations

#### . 13.1 Waste treatment methods

##### . Recommendation

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

##### . European waste catalogue

09 01 05	bleach solutions and bleach fixer solutions
----------	---

##### . Uncleaned packaging:

. **Recommendation:** Disposal must be made according to official regulations.

. **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

### SECTION 14: Transport information

#### . 14.1 UN-Number

. ADR, ADN, IMDG, IATA	Void
------------------------	------

#### . 14.2 UN proper shipping name

. ADR, ADN, IMDG, IATA	Void
------------------------	------

#### . 14.3 Transport hazard class(es)

. ADR, ADN, IMDG, IATA	Void
. Class	

#### . 14.4 Packing group

. ADR, IMDG, IATA	Void
-------------------	------

#### . 14.5 Environmental hazards:

. Marine pollutant:	No
---------------------	----

#### . 14.6 Special precautions for user

Not applicable.
-----------------

#### . 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.
-----------------

#### . UN "Model Regulation":

-
---

### SECTION 15: Regulatory information

. **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

. **Contact:** e-mail: sida@tetenal.com

#### . Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organization

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

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**Safety data sheet**  
**according to 1907/2006/EC, Article 31**

Printing date 07.07.2014

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**Trade name: COLORTEC C-41/ E-6 Negativ Kit Rapid BX-Part 1 Bleachfixbath**

CAS: Chemical Abstracts Service (division of the American Chemical Society)

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**. \* Data compared to the previous version altered.**

— EN —

## Safety data sheet according to 1907/2006/EC, Article 31

Printing date 07.07.2014

version no: 1

Revision: 07.07.2014

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1 Product identifier

Trade name: **COLORTEC C-41/ E-6 Negativ Kit BX Part 2**

Article number: 102034 BX-P2, 102226 BX-P2, 102031 BX-P2, 44021 BX-P2, 102228 BX P2

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

No further relevant information available.

Application of the substance / the mixture Bleachfix preparation for photographic use

#### 1.3 Details of the supplier of the safety data sheet

##### Manufacturer/Supplier:

TETENAL Europe GmbH

Schützenwall 31-35

D-22844 Norderstedt / Germany

Phone: ++49 (0) 40 521 45-0; Fax: +49 (0) 40-52145-296

www.tetenal.com; E-Mail: info@tetenal.com

TETENAL Ltd.,

2 Meridian West, Meridian Business Park, Leicester LE19 1WX

Phone: 0116 - 289 3644; E-Mail: uk@tetenal.com; www.tetenaluk.com

Further information obtainable from: Department environment and safety. E-Mail: info@tetenal.com

1.4 Emergency telephone number: Poison Information Centre Berlin (Germany): +49 (0) 30 - 30686 790

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

##### Classification according to Regulation (EC) No 1272/2008

The product is not classified according to the CLP regulation.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC Not applicable.

##### Information concerning particular hazards for human and environment:

The product does not have to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

No hazards to be particularly mentioned. Please note the information of this Material Safety Data Sheet.

##### Classification system:

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

#### 2.2 Label elements

##### Labelling according to EU guidelines:

Observe the general safety regulations when handling chemicals.

The product is not subject to identification regulations under EU Directives and the Ordinance on Hazardous Materials (German GefStoffV).

##### Special labelling of certain preparations:

Safety data sheet available for professional user on request.

#### 2.3 Other hazards

##### Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

### SECTION 3: Composition/information on ingredients

#### 3.2 Chemical characterization: Mixtures

Description: Mixture of substances listed below and with nonhazardous additions.

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## Safety data sheet

### according to 1907/2006/EC, Article 31

Printing date 07.07.2014






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**Trade name: COLORTEC C-41/ E-6 Negativ Kit BX Part 2**

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**. Dangerous components:**

CAS: 7631-90-5 EINECS: 231-548-0 Index number: 016-064-00-8	sodium hydrogensulphite . . . %  Xn R22 R31 -----  Acute Tox. 4, H302	3-5%
CAS: 64-19-7 EINECS: 200-580-7 Index number: 607-002-00-6 Reg.nr.: 01-2119475328-30	acetic acid  C R35 R10 -----  Flam. Liq. 3, H226;  Skin Corr. 1A, H314	1- <2%

**. Additional information:** For the wording of the listed risk phrases refer to section 16.**SECTION 4: First aid measures****. 4.1 Description of first aid measures****. General information:** No special measures required.**. After inhalation:** Supply fresh air; consult doctor in case of complaints.**. After skin contact:** Immediately rinse with water.**. After eye contact:** Rinse opened eye for several (15 min) under running water.**. After swallowing:**

If symptoms persist consult doctor.

Rinse out mouth and then drink plenty of water.

**. 4.2 Most important symptoms and effects, both acute and delayed**

No further relevant information available.

**. 4.3 Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

**SECTION 5: Firefighting measures****. 5.1 Extinguishing media****. Suitable extinguishing agents:**CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.**. 5.2 Special hazards arising from the substance or mixture**Nitrogen oxides (NO<sub>x</sub>)Sulphur dioxide (SO<sub>2</sub>)**. 5.3 Advice for firefighters****. Protective equipment:** No special measures required.**SECTION 6: Accidental release measures****. 6.1 Personal precautions, protective equipment and emergency procedures** Ensure adequate ventilation**. 6.2 Environmental precautions:**

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

**. 6.3 Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Pick up mechanically.

**. 6.4 Reference to other sections** No dangerous substances are released.**SECTION 7: Handling and storage****. 7.1 Precautions for safe handling** No special measures required.

(Contd. on page 3)

## Safety data sheet

### according to 1907/2006/EC, Article 31

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Trade name: COLORTEC C-41/ E-6 Negativ Kit BX Part 2

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- . **Information about fire - and explosion protection:** No special measures required.
- . **7.2 Conditions for safe storage, including any incompatibilities**
- . **Storage:**
- . **Requirements to be met by storerooms and receptacles:** No special requirements.
- . **Information about storage in one common storage facility:** Store away from foodstuffs.
- . **Further information about storage conditions:**
  - Protect from heat and direct sunlight.
  - Store under lock and key and out of the reach of children.
  - Recommended storage temperature: 5-25 °C
- . **7.3 Specific end use(s)** No further relevant information available.

## SECTION 8: Exposure controls/personal protection

- . **Additional information about design of technical facilities:** No further data; see item 7.

### . 8.1 Control parameters

- . **Ingredients with limit values that require monitoring at the workplace:**

7681-57-4 sodium metabisulphite (sodium disulphite) (1-5%)
--

WEL Long-term value: 5 mg/m <sup>3</sup>
--

- . **Additional information:** The lists valid during the making were used as basis.

### . 8.2 Exposure controls

- . **Personal protective equipment:**

- . **General protective and hygienic measures:**

The usual precautionary measures are to be adhered to when handling chemicals.

Avoid contact with the eyes and skin.

Keep away from foodstuffs, beverages and feed.

- . **Respiratory protection:** Ensure adequate ventilation

- . **Protection of hands:**

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- . **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Butyl rubber, BR

Nitrile rubber, NBR

Neoprene gloves

- . **Penetration time of glove material**

Glove material	breakthrough-time	layer thickness
----------------	-------------------	-----------------

Butyl rubber:	>480 min	≥0,4mm
---------------	----------	--------

Nitrile rubber:	>480 min	≥0,38mm
-----------------	----------	---------

Neoprene:	>240 min	≥0,65mm
-----------	----------	---------

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- . **Eye protection:** Safety glasses

- . **Body protection:** Protective work clothing

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## Safety data sheet

### according to 1907/2006/EC, Article 31

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version no: 1

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Trade name: COLORTEC C-41/ E-6 Negativ Kit BX Part 2

(Contd. of page 3)

### SECTION 9: Physical and chemical properties

#### . 9.1 Information on basic physical and chemical properties

##### . General Information

##### . Appearance:

Form:	Fluid
Colour:	Light yellow
Odour:	Recognizable

. pH-value at 20 °C: 5.4

##### . Change in condition

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: &gt; 100 °C

. Flash point: Not applicable.

. Self-igniting: Product is not selfigniting.

. Danger of explosion: Product does not present an explosion hazard.

. Vapour pressure at 20 °C: 23 hPa

. Density at 20 °C: 1.346 g/cm<sup>3</sup>

##### . Solubility in / Miscibility with water:

Fully miscible.

##### . Viscosity:

Dynamic: Not determined.

Kinematic: Not determined.

##### . Solvent content:

Organic solvents: 1.4 %

Water: &gt;40 %

. 9.2 Other information No further relevant information available.

### SECTION 10: Stability and reactivity

#### . 10.1 Reactivity

#### . 10.2 Chemical stability

. Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

. 10.3 Possibility of hazardous reactions No dangerous reactions known.

. 10.4 Conditions to avoid No further relevant information available.

. 10.5 Incompatible materials: No further relevant information available.

. 10.6 Hazardous decomposition products: Irritant gases/vapours

### SECTION 11: Toxicological information

#### . 11.1 Information on toxicological effects

##### . Acute toxicity:

##### . Primary irritant effect:

. on the skin: No irritant effect.

. on the eye: No irritating effect.

. Sensitization: No sensitizing effects known.

##### . Additional toxicological information:

The product is not subject to classification according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version.

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### according to 1907/2006/EC, Article 31

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**Trade name: COLORTEC C-41/ E-6 Negativ Kit BX Part 2**

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When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.

### SECTION 12: Ecological information

- . **12.1 Toxicity**
- . **Aquatic toxicity:** No further relevant information available.
- . **12.2 Persistence and degradability** No further relevant information available.
- . **12.3 Bioaccumulative potential** No further relevant information available.
- . **12.4 Mobility in soil** No further relevant information available.
- . **Additional ecological information:**
- . **General notes:**  
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water  
Do not allow product to reach ground water, water course or sewage system.
- . **12.5 Results of PBT and vPvB assessment**
- . **PBT:** Not applicable.
- . **vPvB:** Not applicable.
- . **12.6 Other adverse effects** No further relevant information available.

### SECTION 13: Disposal considerations

- . **13.1 Waste treatment methods**
  - . **Recommendation**  
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
  - . **European waste catalogue**
- |          |   |
|----------|---|
| 09 01 05 | bleach solutions and bleach fixer solutions |
|----------|---|
- . **Uncleaned packaging:**
  - . **Recommendation:** Disposal must be made according to official regulations.
  - . **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

### SECTION 14: Transport information

- |   |                 |
|---|-----------------|
| . <b>14.1 UN-Number</b>   |                 |
| . <b>ADR, ADN, IMDG, IATA</b>   | Void            |
| . <b>14.2 UN proper shipping name</b>   |                 |
| . <b>ADR, ADN, IMDG, IATA</b>   | Void            |
| . <b>14.3 Transport hazard class(es)</b>  |                 |
| . <b>ADR, ADN, IMDG, IATA</b>   |                 |
| . <b>Class</b>  | Void            |
| . <b>14.4 Packing group</b>   |                 |
| . <b>ADR, IMDG, IATA</b>  | Void            |
| . <b>14.5 Environmental hazards:</b>  |                 |
| . <b>Marine pollutant:</b>  | No              |
| . <b>14.6 Special precautions for user</b>  | Not applicable. |
| . <b>14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b> | Not applicable. |

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## Safety data sheet according to 1907/2006/EC, Article 31

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version no: 1

Revision: 07.07.2014

**Trade name: COLORTEC C-41/ E-6 Negativ Kit BX Part 2**

(Contd. of page 5)

**. UN "Model Regulation":**

-

### SECTION 15: Regulatory information

**. 15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

**. Relevant phrases**

H226 Flammable liquid and vapour.

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

R10 Flammable.

R22 Harmful if swallowed.

R31 Contact with acids liberates toxic gas.

R35 Causes severe burns.

**. Contact:** e-mail: sida@tetenal.com

**. Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organization

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

Flam. Liq. 3: Flammable liquids, Hazard Category 3

Acute Tox. 4: Acute toxicity, Hazard Category 4

Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A

**. \* Data compared to the previous version altered.**

-EN-

## Safety data sheet according to 1907/2006/EC, Article 31

Printing date 07.07.2014

version no: 1

Revision: 07.07.2014

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1 Product identifier

**Trade name:** COLORTEC E-6 3-BAD KIT STAB Stabilizer

**Article number:** 102034 Stab, 102031 Stab, 45603 STAB

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

No further relevant information available.

**Application of the substance / the mixture** Stabilizer bath for photographic use

#### 1.3 Details of the supplier of the safety data sheet

##### Manufacturer/Supplier:

TETENAL Europe GmbH

Schützenwall 31-35

D-22844 Norderstedt / Germany

Phone: ++49 (0) 40 521 45-0; Fax: +49 (0) 40-52145-296

www.tetenal.com; E-Mail: info@tetenal.com

TETENAL Ltd.,

2 Meridian West, Meridian Business Park, Leicester LE19 1WX

Phone: 0116 - 289 3644; E-Mail: uk@tetenal.com; www.tetenaluk.com

**Further information obtainable from:** Department environment and safety. E-Mail: info@tetenal.com

**1.4 Emergency telephone number:** Poison Information Centre Berlin (Germany): +49 (0) 30 - 30686 790

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

**Classification according to Regulation (EC) No 1272/2008**



GHS08

Carc. 2 H351 Suspected of causing cancer.



GHS07

Skin Sens. 1 H317 May cause an allergic skin reaction.

**Classification according to Directive 67/548/EEC or Directive 1999/45/EC**



Xn; Harmful

R40: Limited evidence of a carcinogenic effect.



Xi; Sensitising

R43: May cause sensitisation by skin contact.

#### Information concerning particular hazards for human and environment:

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

#### Classification system:

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

(Contd. on page 2)

## Safety data sheet

### according to 1907/2006/EC, Article 31

Printing date 07.07.2014

version no: 1

Revision: 07.07.2014

Trade name: COLORTEC E-6 3-BAD KIT STAB Stabilizer

(Contd. of page 1)

#### 2.2 Label elements

##### Labelling according to EU guidelines:

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.

##### Code letter and hazard designation of product:



Xn Harmful

##### Hazard-determining components of labelling:

formaldehyde

##### Risk phrases:

40 Limited evidence of a carcinogenic effect.

43 May cause sensitisation by skin contact.

##### Safety phrases:

2 Keep out of the reach of children.

29 Do not empty into drains.

36/37 Wear suitable protective clothing and gloves.

46 If swallowed, seek medical advice immediately and show this container or label.

#### 2.3 Other hazards

##### Results of PBT and vPvB assessment

**PBT:** Not applicable.

**vPvB:** Not applicable.

## SECTION 3: Composition/information on ingredients

#### 3.2 Chemical characterization: Mixtures

**Description:** Mixture of substances listed below and with nonhazardous additions.

##### Dangerous components:

CAS: 50-00-0 EINECS: 200-001-8 Index number: 605-001-00-5 Reg.nr.: 01-2119488953-20	formaldehyde T R23/24/25; C R34; Xn R40; Xi R43 Carc. Cat. 3 Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; Carc. 2, H351; Skin Corr. 1B, H314; Skin Sens. 1, H317	2%
CAS: 68131-39-5 NLP: 500-195-7	Alcohol ethoxylate Xn R22; Xi R41; N R50 Eye Dam. 1, H318; Aquatic Acute 1, H400; Acute Tox. 4, H302; Aquatic Chronic 3, H412	<1%

**Additional information:** For the wording of the listed risk phrases refer to section 16.

## SECTION 4: First aid measures

#### 4.1 Description of first aid measures

##### After inhalation:

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

**After skin contact:** Immediately wash with water and soap and rinse thoroughly.

**After eye contact:** Rinse opened eye for several (15 min) under running water.

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## Safety data sheet according to 1907/2006/EC, Article 31

Printing date 07.07.2014

version no: 1

Revision: 07.07.2014

**Trade name: COLORTEC E-6 3-BAD KIT STAB Stabilizer**

(Contd. of page 2)

- . **After swallowing:**  
If symptoms persist consult doctor.  
Induce vomiting only, if affected person is fully conscious.
- . **4.2 Most important symptoms and effects, both acute and delayed**  
No further relevant information available.
- . **Information for doctor:**  
Links for hazardous substances data GESTIS: <http://www.dguv.de/ifa/de/gestis/stoffdb/index.jsp>
- . **4.3 Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### SECTION 5: Firefighting measures

- . **5.1 Extinguishing media**
- . **Suitable extinguishing agents:**  
CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- . **5.2 Special hazards arising from the substance or mixture** No further relevant information available.
- . **5.3 Advice for firefighters**
- . **Protective equipment:** No special measures required.

### SECTION 6: Accidental release measures

- . **6.1 Personal precautions, protective equipment and emergency procedures** Ensure adequate ventilation
- . **6.2 Environmental precautions:**  
Dilute with plenty of water.  
Do not allow to enter sewers/ surface or ground water.
- . **6.3 Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Dispose contaminated material as waste according to item 13.
- . **6.4 Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

### SECTION 7: Handling and storage

- . **7.1 Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of aerosols.
- . **Information about fire - and explosion protection:** No special measures required.
- . **7.2 Conditions for safe storage, including any incompatibilities**
- . **Storage:**
- . **Requirements to be met by storerooms and receptacles:** No special requirements.
- . **Information about storage in one common storage facility:** Store away from foodstuffs.
- . **Further information about storage conditions:**  
Store in cool, dry conditions in well sealed receptacles.  
Store under lock and key and out of the reach of children.  
Recommended storage temperature: 5-25 °C
- . **7.3 Specific end use(s)** No further relevant information available.

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(Contd. on page 4)

## Safety data sheet

### according to 1907/2006/EC, Article 31

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Revision: 07.07.2014

Trade name: COLORTEC E-6 3-BAD KIT STAB Stabilizer

(Contd. of page 3)

### SECTION 8: Exposure controls/personal protection

. **Additional information about design of technical facilities:** No further data; see item 7.

#### . 8.1 Control parameters

. **Ingredients with limit values that require monitoring at the workplace:**

##### 50-00-0 formaldehyde (1-5 %)

WEL	Short-term value: 2.5 mg/m <sup>3</sup> , 2 ppm
	Long-term value: 2.5 mg/m <sup>3</sup> , 2 ppm

. **Additional information:** The lists valid during the making were used as basis.

#### . 8.2 Exposure controls

. **Personal protective equipment:**

. **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the skin.

. **Respiratory protection:** Ensure adequate ventilation

. **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

. **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Butyl rubber, BR

Nitrile rubber, NBR

Neoprene gloves

. **Penetration time of glove material**

Glove material	breakthrough-time	layer thickness
----------------	-------------------	-----------------

Butyl rubber:	>480 min	≥0,4mm
---------------	----------	--------

Nitrile rubber:	>480 min	≥0,38mm
-----------------	----------	---------

Neoprene:	>240 min	≥0,65mm
-----------	----------	---------

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

. **Eye protection:**



Tightly sealed goggles

Safety glasses

. **Body protection:** Protective work clothing

EN

(Contd. on page 5)

## Safety data sheet

### according to 1907/2006/EC, Article 31

Printing date 07.07.2014

version no: 1

Revision: 07.07.2014

Trade name: COLORTEC E-6 3-BAD KIT STAB Stabilizer

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### SECTION 9: Physical and chemical properties

#### . 9.1 Information on basic physical and chemical properties

##### . General Information

##### . Appearance:

Form:	Fluid
Colour:	Colourless
Odour:	Recognizable

. pH-value at 20 °C: 4.8

##### . Change in condition

Melting point/Melting range: 0 °C

Boiling point/Boiling range: Undetermined.

. Flash point: Not applicable.

. Self-igniting: Product is not selfigniting.

. Danger of explosion: Product does not present an explosion hazard.

. Vapour pressure at 20 °C: 23 hPa

. Density at 20 °C: 1 g/cm<sup>3</sup>

##### . Solubility in / Miscibility with water:

Fully miscible.

##### . Solvent content:

Organic solvents: 2.8 %

Water: &gt;96 %

. 9.2 Other information No further relevant information available.

### SECTION 10: Stability and reactivity

#### . 10.1 Reactivity

#### . 10.2 Chemical stability

. Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

. 10.3 Possibility of hazardous reactions No dangerous reactions known.

. 10.4 Conditions to avoid No further relevant information available.

. 10.5 Incompatible materials: No further relevant information available.

. 10.6 Hazardous decomposition products: Irritant gases/vapours

### SECTION 11: Toxicological information

#### . 11.1 Information on toxicological effects

##### . Acute toxicity:

##### . LD/LC50 values relevant for classification:

##### 50-00-0 formaldehyde

Oral	LD50	100 mg/kg (rat)
Dermal	LD50	270 mg/kg (rabbit)
Inhalative	LC50	0.57 mg/L (rat)

##### . Primary irritant effect:

. on the skin: No irritant effect.

. on the eye: No irritating effect.

. Sensitization: Sensitization possible through skin contact.

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## Safety data sheet

### according to 1907/2006/EC, Article 31

Printing date 07.07.2014

version no: 1

Revision: 07.07.2014

Trade name: COLORTEC E-6 3-BAD KIT STAB Stabilizer

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**. Additional toxicological information:**

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

Irritant

Harmful

### SECTION 12: Ecological information

**. 12.1 Toxicity**

**. Aquatic toxicity:**

**50-00-0 formaldehyde**

EC50 96h: 24 mg/l (daphnia magna (Großer Wasserfloh))

LC50 96h: 24 mg/L (Pimephales promelas)

**. 12.2 Persistence and degradability** No further relevant information available.

**. 12.3 Bioaccumulative potential** No further relevant information available.

**. 12.4 Mobility in soil** No further relevant information available.

**. Additional ecological information:**

**. General notes:**

Do not allow product to reach ground water, water course or sewage system.

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

**. 12.5 Results of PBT and vPvB assessment**

**. PBT:** Not applicable.

**. vPvB:** Not applicable.

**. 12.6 Other adverse effects** No further relevant information available.

### SECTION 13: Disposal considerations

**. 13.1 Waste treatment methods**

**. Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

**. European waste catalogue**

09 01 99	wastes not otherwise specified
----------	--------------------------------

**. Uncleaned packaging:**

**. Recommendation:** Disposal must be made according to official regulations.

**. Recommended cleansing agents:** Water, if necessary together with cleansing agents.

### SECTION 14: Transport information

**. 14.1 UN-Number**

ADR, ADN, IMDG, IATA	Void
----------------------	------

**. 14.2 UN proper shipping name**

ADR, ADN, IMDG, IATA	Void
----------------------	------

**. 14.3 Transport hazard class(es)**

ADR, ADN, IMDG, IATA	
----------------------	--

Class	Void
-------	------

**. 14.4 Packing group**

ADR, IMDG, IATA	Void
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- |   |                 |
|---|-----------------|
| <b>. 14.5 Environmental hazards:</b>  |                 |
| <b>. Marine pollutant:</b>  | No              |
| <b>. 14.6 Special precautions for user</b>  | Not applicable. |
| <b>. 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b> | Not applicable. |
| <b>. UN "Model Regulation":</b>   | -               |

### SECTION 15: Regulatory information

- . 15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

**. Relevant phrases**

- |           |   |
|-----------|---|
| H301      | Toxic if swallowed.   |
| H302      | Harmful if swallowed.                                       |
| H311      | Toxic in contact with skin.                                 |
| H314      | Causes severe skin burns and eye damage.                    |
| H317      | May cause an allergic skin reaction.                        |
| H318      | Causes serious eye damage.                                  |
| H331      | Toxic if inhaled.   |
| H351      | Suspected of causing cancer.                                |
| H400      | Very toxic to aquatic life.                                 |
| H412      | Harmful to aquatic life with long lasting effects.          |
| .....     |   |
| R22       | Harmful if swallowed.                                       |
| R23/24/25 | Toxic by inhalation, in contact with skin and if swallowed. |
| R34       | Causes burns.   |
| R40       | Limited evidence of a carcinogenic effect.                  |
| R41       | Risk of serious damage to eyes.                             |
| R43       | May cause sensitisation by skin contact.                    |
| R50       | Very toxic to aquatic organisms.                            |

- . Department issuing MSDS:** Department product safety

- . Contact:** e-mail: sida@tetenal.com

**. Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)  
 ICAO: International Civil Aviation Organization  
 ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)  
 IMDG: International Maritime Code for Dangerous Goods  
 IATA: International Air Transport Association  
 GHS: Globally Harmonized System of Classification and Labelling of Chemicals  
 EINECS: European Inventory of Existing Commercial Chemical Substances  
 ELINCS: European List of Notified Chemical Substances  
 CAS: Chemical Abstracts Service (division of the American Chemical Society)  
 LC50: Lethal concentration, 50 percent  
 LD50: Lethal dose, 50 percent  
 Acute Tox. 3: Acute toxicity, Hazard Category 3  
 Acute Tox. 4: Acute toxicity, Hazard Category 4  
 Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B  
 Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1

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**Safety data sheet**  
**according to 1907/2006/EC, Article 31**

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**Trade name: COLORTEC E-6 3-BAD KIT STAB Stabilizer**

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Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

Carc. 2: Carcinogenicity, Hazard Category 2

Aquatic Acute 1: Hazardous to the aquatic environment - AcuteHazard, Category 1

Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3

**. \* Data compared to the previous version altered.**

— EN —

10.05.2010

**Kit Components**

Product code	Description
<b>102228</b>	<b>Colortec C-41Negative-Kit Rapid liquid f. 5L</b>

Components:

45605	COLORTEC C-41 Rapid Farbentwickler Part 1
45606	COLORTEC C-41 Rapid Farbentwickler Part 2
45607	COLORTEC C-41 Rapid Farbentwickler Part 3
44020	COLORTEC E-6 /C-41 3-Bad Bleichfixierbad BX Part1
44021	COLORTEC E-6 / C-41 Bleichfixierbad BX Part 2
45544	COLORTEC C-41 Stabilisierbad Regenerator STAB-BNP

# Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date 10.05.2010

version no: 1

Revision: 07.05.2010

## 1 Identification of the substance/preparation and of the company/undertaking

### · Product details

· Trade name: **COLORTEC C-41 Rapid Color-Developer Part 1**

· Article number: 45605, zu 102226 P1, zu102228 P1, 6523/3 Part 1

· Application of the substance / the preparation Developer for photographic use

### · Manufacturer/Supplier:

TETENAL AG & CO. KG

Schützenwall 31-35

D-22844 Norderstedt / Germany

Tel.: +49 040 521 45-0

Fax: +49 040-52145-296

www.tetenal.com

E-mail: info@tetenal.com

TETENAL LTD., Unit 1, Foxholes Road

Leicester LE3 1TH / Great Britain

Tel.: +44 0870 460 8996 Fax: +44 0870 460 8997, e.mail: uk@tetenal.com, www.tetenal.co.uk

· Further information obtainable from: Department environment and safety. E-mail: info@tetenal.com

· Information in case of emergency: Poison Information Centre Berlin (Germany): +49 (0) 30 - 30686 790

## 2 Hazards identification

### · Hazard description:



Xi Irritant

### · Information concerning particular hazards for human and environment:

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

R 43 May cause sensitisation by skin contact.

R 40 Limited evidence of a carcinogenic effect.

### · Classification system:

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

### · GHS label elements



Warning

H351 - Suspected of causing cancer.



Warning

H317 - May cause an allergic skin reaction.

### · Prevention:

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P281 Use personal protective equipment as required.

### · Response:

P321 Specific treatment (see on this label).

### · Storage:

P405 Store locked up.

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## Safety Data Sheet

### according to 1907/2006/EC, Article 31

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Trade name: COLORTEC C-41 Rapid Color-Developer Part 1

(Contd. of page 1)

· **Disposal:**

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

### 3 Composition/information on ingredients

· **Chemical characterization**· **Description:** Mixture of substances listed below with nonhazardous additions.· **Dangerous components:**

CAS: 10039-54-0	bis(hydroxylammonium)sulfate	1-5%
EINECS: 233-118-8	Carc. Cat. 3;  Xn,  Xi,  E,  N; R 2-21/22-36/38-40-43-48/22-50	
	Warning:  3.6/2, 3.9/2;  2.16/1;  4.1.A/1;  3.1.O/4, 3.1.D/4, 3.4.S/1; 3.2/2, 3.3/2	

· **Additional information:** For the wording of the listed risk phrases refer to section 16.

### 4 First aid measures

· **General information:** Immediately remove any clothing/shoes soiled by the product.· **After inhalation:**

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

· **After skin contact:** Immediately wash with water and soap and rinse thoroughly.· **After eye contact:**

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

· **After swallowing:**

If symptoms persist consult doctor.

Drink plenty of water and provide fresh air. Call for a doctor immediately.

### 5 Fire-fighting measures

· **Suitable extinguishing agents:**CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.· **Special hazards caused by the substance, its products of combustion or resulting gases:**

Under certain fire conditions, traces of other toxic gases cannot be excluded.

· **Protective equipment:** No special measures required.

### 6 Accidental release measures

· **Person-related safety precautions:** Ensure adequate ventilation· **Measures for environmental protection:**

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

· **Measures for cleaning/collecting:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Pick up mechanically.

### 7 Handling and storage

· **Handling:**· **Information for safe handling:** Ensure good ventilation/exhaustion at the workplace.

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## Safety Data Sheet

### according to 1907/2006/EC, Article 31

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**Trade name: COLORTEC C-41 Rapid Color-Developer Part 1**

(Contd. of page 2)

- **Information about fire - and explosion protection:** No special measures required.
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:**
  - Store away from foodstuffs.
  - Store away from oxidizing agents.
- **Further information about storage conditions:**
  - Protect from heat and direct sunlight.
  - Store under lock and key and out of the reach of children.
  - Recommended storage temperature: 5-25°C
  - Protect from exposure to the light.

## 8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Ingredients with limit values that require monitoring at the workplace:**
  - The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists valid during the making were used as basis.
- **Personal protective equipment:**
- **General protective and hygienic measures:**
  - Immediately remove all soiled and contaminated clothing
  - Wash hands before breaks and at the end of work.
  - Do not inhale gases / fumes / aerosols.
  - Avoid contact with the eyes and skin.
- **Respiratory protection:** Not necessary if room is well-ventilated.
- **Protection of hands:**



Protective gloves

Impervious gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Butyl rubber, BR

Nitrile rubber, NBR

Neoprene gloves

- **Penetration time of glove material**

Glove material: Butyl rubber with breakthrough-time:  $\geq 480$  min, layer thickness:  $\geq 0,4$  mm

Gloves made of nitrile rubber with layer thickness  $> 0,38$  mm and breakthrough-time  $> 480$  min

Glove material: Neopren with breakthrough time:  $> 240$  min, layer thickness:  $> 0,65$  mm

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

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## Safety Data Sheet

### according to 1907/2006/EC, Article 31

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Trade name: COLORTEC C-41 Rapid Color-Developer Part 1

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## · Eye protection:



Tightly sealed goggles

## · Body protection: Protective work clothing

## 9 Physical and chemical properties

## · General Information

<b>Form:</b>	Fluid
<b>Colour:</b>	Colourless
<b>Odour:</b>	Odourless

## · Change in condition

<b>Melting point/Melting range:</b>	0°C
<b>Boiling point/Boiling range:</b>	> 100°C

## · Flash point: Not applicable.

## · Self-igniting: Product is not selfigniting.

## · Danger of explosion: Product does not present an explosion hazard.

## · Vapour pressure at 20°C: 23 hPa

· Density at 20°C: 1 g/cm<sup>3</sup>

## · Solubility in / Miscibility with water: Fully miscible.

## · pH-value at 20°C: 3.5

## · Solvent content:

<b>Organic solvents:</b>	0.0 %
<b>Water:</b>	96.5 %

## 10 Stability and reactivity

## · Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

## · Materials to be avoided:

## · Dangerous reactions No dangerous reactions known.

## · Dangerous decomposition products: Irritant gases/vapours

## 11 Toxicological information

## · Acute toxicity:

## · LD/LC50 values relevant for classification:

10039-54-0 bis(hydroxylammonium)sulfate

Oral	LD50	600 mg/kg (rat)
Dermal	LD50	1500 mg/kg (rabbit)

## · Primary irritant effect:

## · on the skin: No irritant effect.

## · on the eye: No irritating effect.

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**Trade name: COLORTEC C-41 Rapid Color-Developer Part 1**

(Contd. of page 4)

- **Sensitization:** Sensitization possible through skin contact.
- **Additional toxicological information:**  
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:  
Irritant
- **Sensitisation** May cause sensitisation by skin contact.

### 12 Ecological information

- **Ecotoxical effects:**

- **Aquatic toxicity:**

**10039-54-0 bis(hydroxylammonium)sulfate**

EC50 48h: 1.62 mg/l (daphnia magna)

LC50 96h: 1.2 mg/l (daphnia magna)

- **Additional ecological information:**

- **General notes:**

Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water  
Do not allow product to reach ground water, water course or sewage system.  
Danger to drinking water if even small quantities leak into the ground.

### 13 Disposal considerations

- **Product:**

- **Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

- **European waste catalogue**

09 01 01	water-based developer and activator solutions
----------	---

- **Uncleaned packaging:**

- **Recommendation:**

Dispose of packaging according to regulations on the disposal of packagings.  
Disposal must be made according to official regulations.

- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

### 14 Transport information

- **Land transport ADR/RID (cross-border)**

- **ADR/RID class:** -

- **Maritime transport IMDG:**

- **IMDG Class:** -

- **Marine pollutant:** No

- **Air transport ICAO-TI and IATA-DGR:**

- **ICAO/IATA Class:** -

- **UN "Model Regulation":** -

GB

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## Safety Data Sheet

### according to 1907/2006/EC, Article 31

Printing date 10.05.2010

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Trade name: COLORTEC C-41 Rapid Color-Developer Part 1

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### 15 Regulatory information

· **Labelling according to EU guidelines:**

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.

· **Code letter and hazard designation of product:**



Xi Irritant

· **Hazard-determining components of labelling:**

bis(hydroxylammonium)sulfate

· **Risk phrases:**

- 43 May cause sensitisation by skin contact.
- 40 Limited evidence of a carcinogenic effect.

· **Safety phrases:**

- 2 Keep out of the reach of children.
- 24 Avoid contact with skin.
- 37 Wear suitable gloves.
- 46 If swallowed, seek medical advice immediately and show this container or label.
- 29 Do not empty into drains.

### 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant R-phrases**

- 2 Risk of explosion by shock, friction, fire or other sources of ignition.
- 21/22 Harmful in contact with skin and if swallowed.
- 36/38 Irritating to eyes and skin.
- 40 Limited evidence of a carcinogenic effect.
- 43 May cause sensitisation by skin contact.
- 48/22 Harmful: danger of serious damage to health by prolonged exposure if swallowed.
- 50 Very toxic to aquatic organisms.

· **Department issuing MSDS:** Department product safety

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)  
 RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)  
 IMDG: International Maritime Code for Dangerous Goods  
 IATA: International Air Transport Association  
 IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)  
 ICAO: International Civil Aviation Organization  
 ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)  
 GHS: Globally Harmonized System of Classification and Labelling of Chemicals  
 LC50: Lethal concentration, 50 percent  
 LD50: Lethal dose, 50 percent

· **\* Data compared to the previous version altered.**

# Safety Data Sheet

## according to 1907/2006/EC, Article 31

Printing date 10.05.2010

version no: 1

Revision: 07.05.2010

### 1 Identification of the substance/preparation and of the company/undertaking

- **Product details**

- **Trade name:** COLORTEC C-41 Rapid Colour Developer Part 2

- **Article number:** 45606, zu102226 Part2, zu102228 Part2, 6523/3 Part2

- **Application of the substance / the preparation** Developer for photographic use

- **Manufacturer/Supplier:**

TETENAL AG &amp; CO. KG

Schützenwall 31-35

D-22844 Norderstedt / Germany

Tel.: +49 040 521 45-0

Fax: +49 040-52145-296

www.tetenal.com

E-mail: info@tetenal.com

TETENAL LTD., Unit 1, Foxholes Road

Leicester LE3 1TH / Great Britain

Tel.: +44 0870 460 8996 Fax: +44 0870 460 8997, e.mail: uk@tetenal.com, www.tetenal.co.uk

- **Further information obtainable from:** Department environment and safety. E-mail: info@tetenal.com

- **Information in case of emergency:** Poison Information Centre Berlin (Germany): +49 (0) 30 - 30686 790

### 2 Hazards identification

- **Hazard description:**



Xn Harmful

N Dangerous for the environment

- **Information concerning particular hazards for human and environment:**

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

R 22 Harmful if swallowed.

R 43 May cause sensitisation by skin contact.

R 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

- **Classification system:**

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

- **GHS label elements**

**Warning**

H302 - Harmful if swallowed.

H319 - Causes serious eye irritation.

H317 - May cause an allergic skin reaction.



H411 - Toxic to aquatic life with long lasting effects.

- **Prevention:**

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

- **Response:**

P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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### according to 1907/2006/EC, Article 31

Printing date 10.05.2010

version no: 1

Revision: 07.05.2010

**Trade name: COLORTEC C-41 Rapid Colour Developer Part 2**

P321 Specific treatment (see on this label).

(Contd. of page 1)

**Disposal:**

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

### 3 Composition/information on ingredients

**Chemical characterization**
**Description:** Mixture of substances listed below with nonhazardous additions.

**Dangerous components:**

CAS: 25646-77-9 EINECS: 247-162-0	(4-ammonio-m-tolyl)ethyl(2-hydroxyethyl)ammonium sulphate p-Phenylenediamine derivate (CD-4) T, Xi, N; R 25-43-48/22-50/53 Danger: 3.1.O/3 Warning: 3.9/2; 4.1.A/1, 4.1.C/1; 3.4.S/1	1-5%
CAS: 7681-57-4 EINECS: 231-673-0	disodium disulphite Xn, Xi; R 22-31-41 Danger: 3.3/1 Warning: 3.1.O/4	1-5%

**Additional information:** For the wording of the listed risk phrases refer to section 16.

### 4 First aid measures

**General information:**

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

**After inhalation:**

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

**After skin contact:** Immediately wash with water and soap and rinse thoroughly.

**After eye contact:** Rinse opened eye for several (15 min) under running water.

**After swallowing:**

Rinse out mouth and then drink plenty of water.

Call for a doctor immediately.

### 5 Fire-fighting measures

**Suitable extinguishing agents:**

 CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

**Special hazards caused by the substance, its products of combustion or resulting gases:**

 Nitrogen oxides (NO<sub>x</sub>)

 Sulphur dioxide (SO<sub>2</sub>)

**Protective equipment:** No special measures required.

### 6 Accidental release measures

**Person-related safety precautions:** Ensure adequate ventilation

**Measures for environmental protection:**

Inform respective authorities in case of seepage into water course or sewage system.

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

(Contd. on page 3)

## Safety Data Sheet

### according to 1907/2006/EC, Article 31

Printing date 10.05.2010

version no: 1

Revision: 07.05.2010

Trade name: COLORTEC C-41 Rapid Colour Developer Part 2

(Contd. of page 2)

- **Measures for cleaning/collecting:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.

## 7 Handling and storage

- **Handling:**

- **Information for safe handling:**

Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of aerosols.

- **Information about fire - and explosion protection:** No special measures required.

- **Storage:**

- **Requirements to be met by storerooms and receptacles:** No special requirements.

- **Information about storage in one common storage facility:** Store away from foodstuffs.

- **Further information about storage conditions:**

Protect from heat and direct sunlight.  
Store under lock and key and out of the reach of children.  
Recommended storage temperature: 5-25°C  
Protect from exposure to the light.

## 8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.

- **Ingredients with limit values that require monitoring at the workplace:**

**7681-57-4 disodium disulphite (<2%)**

WEL Long-term value: 5 mg/m<sup>3</sup>

- **Additional information:** The lists valid during the making were used as basis.

- **Personal protective equipment:**

- **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing  
Wash hands before breaks and at the end of work.  
Avoid contact with the skin.

- **Respiratory protection:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

- **Protection of hands:**



Protective gloves

Impervious gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**

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GB

## Safety Data Sheet

### according to 1907/2006/EC, Article 31

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**Trade name: COLORTEC C-41 Rapid Colour Developer Part 2**

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The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

Glove material: Butyl rubber with breakthrough-time:  $\geq 480$  min, layer thickness:  $\geq 0,4$  mm

Gloves made of nitrile rubber with layer thickness  $> 0,38$  mm and breakthrough-time  $> 480$  min

Glove material: Neopren with breakthrough time:  $> 240$  min, layer thickness:  $> 0,65$  mm

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**



Tightly sealed goggles

Safety glasses

· **Body protection:** Protective work clothing

## 9 Physical and chemical properties

· **General Information**

**Form:** Fluid  
**Colour:** Light yellow  
**Odour:** Pungent  
to sulfur dioxide

· **Change in condition**

**Melting point/Melting range:** Undetermined.

**Boiling point/Boiling range:**  $> 100^{\circ}\text{C}$

· **Flash point:** Not applicable.

· **Self-igniting:** Product is not selfigniting.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Vapour pressure at  $20^{\circ}\text{C}$ :** 23 hPa

· **Density at  $20^{\circ}\text{C}$ :**  $1.04 \text{ g/cm}^3$

· **Solubility in / Miscibility with water:** Fully miscible.

· **pH-value at  $20^{\circ}\text{C}$ :** 4.3

· **Solvent content:**

**Organic solvents:** 0.0 %

**Water:** 91.9 %

## 10 Stability and reactivity

· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

· **Materials to be avoided:**

· **Dangerous reactions** Reacts with acids, alkalis and oxidizing agents.

(Contd. on page 5)

GB

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### according to 1907/2006/EC, Article 31

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Trade name: COLORTEC C-41 Rapid Colour Developer Part 2

· **Dangerous decomposition products:** Irritant gases/vapours

(Contd. of page 4)

### 11 Toxicological information

· **Acute toxicity:**· **LD/LC50 values relevant for classification:**

**25646-77-9 (4-ammonio-m-tolyl)ethyl(2-hydroxyethyl)ammonium sulphate**  
**p-Phenylenediamine derivate (CD-4)**

Oral	LD50	2300 mg/kg (mouse) 58 mg/kg (rat)
------	------	--------------------------------------

· **Primary irritant effect:**· **on the skin:** No irritant effect.· **on the eye:** No irritating effect.· **Sensitization:** Sensitization possible through skin contact.· **Additional toxicological information:**

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

Harmful

Irritant

· **Sensitisation** May cause sensitisation by skin contact.

### 12 Ecological information

· **Ecotoxical effects:**· **Remark:** Toxic for fish· **Additional ecological information:**· **General notes:**

Water hazard class 3 (German Regulation) (Self-assessment): extremely hazardous for water

Do not allow product to reach ground water, water course or sewage system, even in small quantities.

Danger to drinking water if even extremely small quantities leak into the ground.

Also poisonous for fish and plankton in water bodies.

Toxic for aquatic organisms

### 13 Disposal considerations

· **Product:**· **Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· **European waste catalogue**

09 01 01*	water-based developer and activator solutions
-----------	---

· **Uncleaned packaging:**· **Recommendation:** Disposal must be made according to official regulations.· **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

GB

(Contd. on page 6)

## Safety Data Sheet

### according to 1907/2006/EC, Article 31

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version no: 1

Revision: 07.05.2010

Trade name: COLORTEC C-41 Rapid Colour Developer Part 2

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### 14 Transport information

#### · Land transport ADR/RID (cross-border)



- **ADR/RID class:** 9 (M6) Miscellaneous dangerous substances and articles.
- **Danger code (Kemler):** 90
- **UN-Number:** 3082
- **Packaging group:** III
- **Hazard label:** 9
- **Special marking:** Symbol (fish and tree)
- **Description of goods:** 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (p-Phenylenediamine derivate)
- **Tunnel restriction code** E

#### · Maritime transport IMDG:



- **IMDG Class:** 9
- **UN Number:** 3082
- **Label** 9
- **Packaging group:** III
- **EMS Number:** F-A,S-F
- **Marine pollutant:** Yes
- **Proper shipping name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (p-Phenylenediamine derivate )

#### · Air transport ICAO-TI and IATA-DGR:



- **ICAO/IATA Class:** 9
- **UN/ID Number:** 3082
- **Label** 9
- **Special marking:** Symbol (fish and tree)
- **Packaging group:** III
- **Proper shipping name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (p-Phenylenediamine derivate )

#### · UN "Model Regulation":

UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9, III

### 15 Regulatory information

#### · Labelling according to EU guidelines:

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.

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## Safety Data Sheet

### according to 1907/2006/EC, Article 31

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**Trade name: COLORTEC C-41 Rapid Colour Developer Part 2**

(Contd. of page 6)

**· Code letter and hazard designation of product:**


Xn Harmful  
N Dangerous for the environment

**· Hazard-determining components of labelling:**

(4-ammonio-m-tolyl)ethyl(2-hydroxyethyl)ammonium sulphate  
p-Phenylenediamine derivate (CD-4)

**· Risk phrases:**

22 Harmful if swallowed.  
43 May cause sensitisation by skin contact.  
51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**· Safety phrases:**

24 Avoid contact with skin.  
37 Wear suitable gloves.  
57 Use appropriate container to avoid environmental contamination.  
2 Keep out of the reach of children.  
29 Do not empty into drains.

## 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

**· Relevant R-phrases**

22 Harmful if swallowed.  
25 Toxic if swallowed.  
31 Contact with acids liberates toxic gas.  
41 Risk of serious damage to eyes.  
43 May cause sensitisation by skin contact.  
48/22 Harmful: danger of serious damage to health by prolonged exposure if swallowed.  
50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**· Department issuing MSDS: Department product safety**
**· Contact: e-mail: sida@tetenal.com**
**· Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)  
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)  
IMDG: International Maritime Code for Dangerous Goods  
IATA: International Air Transport Association  
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)  
ICAO: International Civil Aviation Organization  
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)  
GHS: Globally Harmonized System of Classification and Labelling of Chemicals  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent

**· \* Data compared to the previous version altered.**

# Safety Data Sheet

## according to 1907/2006/EC, Article 31

Printing date 10.05.2010

version no: 1

Revision: 07.05.2010

### 1 Identification of the substance/preparation and of the company/undertaking

· **Product details**

· **Trade name:** COLORTEC C-41 Colour Developer Part 3

· **Article number:** 45607, zu102226 Part3, zu102228 Part3, 6523/3 Part 3

· **Application of the substance / the preparation** Developer for photographic use

· **Manufacturer/Supplier:**

TETENAL AG & CO. KG

Schützenwall 31-35

D-22844 Norderstedt / Germany

Tel.: +49 040 521 45-0

Fax: +49 040-52145-296

www.tetenal.com

E-mail: info@tetenal.com

TETENAL LTD., Unit 1, Foxholes Road

Leicester LE3 1TH / Great Britain

Tel.: +44 0870 460 8996 Fax: +44 0870 460 8997, e.mail: uk@tetenal.com, www.tetenal.co.uk

· **Further information obtainable from:** Department environment and safety. E-mail: info@tetenal.com

· **Information in case of emergency:** Poison Information Centre Berlin (Germany): +49 (0) 30 - 30686 790

### 2 Hazards identification

· **Hazard description:**



Xi Irritant

· **Information concerning particular hazards for human and environment:**

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

R 36/38 Irritating to eyes and skin.

· **Classification system:**

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

· **GHS label elements**



Warning

H315 - Causes skin irritation.

H319 - Causes serious eye irritation.

· **Prevention:**

P280 Wear protective gloves/protective clothing/eye protection/face protection.

· **Response:**

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P321 Specific treatment (see on this label).

P332+P313 If skin irritation occurs: Get medical advice/attention.

P337+P313 If eye irritation persists: Get medical advice/attention.

P362 Take off contaminated clothing and wash before reuse.

GB

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## Safety Data Sheet

### according to 1907/2006/EC, Article 31

Printing date 10.05.2010

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Trade name: **COLORTEC C-41 Colour Developer Part 3**

(Contd. of page 1)

### 3 Composition/information on ingredients

- **Chemical characterization**
- **Description:** Mixture of substances listed below with nonhazardous additions.

- **Dangerous components:**

CAS: 584-08-7 EINECS: 209-529-3	potassium carbonate  Xi; R 36/38 Warning:  3.2/2, 3.3/2	25-50%
CAS: 140-01-2 EINECS: 205-391-3	Sodium diethylene triamine pentaacetic acid (DTPA-Na5)  Xi; R 36 Warning:  3.3/2	1-5%

- **Additional information:** For the wording of the listed risk phrases refer to section 16.

### 4 First aid measures

- **General information:** Immediately remove any clothing/shoes soiled by the product.
- **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:**  
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:**  
Rinse out mouth and then drink plenty of water.  
If symptoms persist consult doctor.

### 5 Fire-fighting measures

- **Suitable extinguishing agents:**  
CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards caused by the substance, its products of combustion or resulting gases:**  
Under certain fire conditions, traces of other toxic gases cannot be excluded.
- **Protective equipment:** No special measures required.

### 6 Accidental release measures

- **Person-related safety precautions:** Ensure adequate ventilation
- **Measures for environmental protection:**  
Dilute with plenty of water.  
Do not allow to enter sewers/ surface or ground water.
- **Measures for cleaning/collecting:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Pick up mechanically.

### 7 Handling and storage

- **Handling:**
- **Information for safe handling:** Ensure good ventilation/exhaustion at the workplace.
- **Information about fire - and explosion protection:** No special measures required.
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.

(Contd. on page 3)

## Safety Data Sheet

according to 1907/2006/EC, Article 31

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**Trade name: COLORTEC C-41 Colour Developer Part 3**

(Contd. of page 2)

**· Information about storage in one common storage facility:**

- Store away from foodstuffs.
- Store away from oxidizing agents.

**· Further information about storage conditions:**

- Keep container tightly sealed.
- Store in cool, dry conditions in well sealed receptacles.
- Protect from heat and direct sunlight.
- Store under lock and key and out of the reach of children.
- Recommended storage temperature: 5-25°C
- Protect from exposure to the light.

### 8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.

- **Ingredients with limit values that require monitoring at the workplace:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

- **Additional information:** The lists valid during the making were used as basis.

- **Personal protective equipment:**

- **General protective and hygienic measures:**

- Keep away from foodstuffs, beverages and feed.
- Immediately remove all soiled and contaminated clothing
- Wash hands before breaks and at the end of work.
- Do not inhale gases / fumes / aerosols.
- Avoid contact with the eyes and skin.

- **Respiratory protection:** Not necessary if room is well-ventilated.

- **Protection of hands:**



Protective gloves

**Impervious gloves**

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Butyl rubber, BR

Nitrile rubber, NBR

- **Penetration time of glove material**

Glove material: Butyl rubber with breakthrough-time:  $\geq 480$  min, layer thickness:  $\geq 0,4$  mm

Gloves made of nitrile rubber with layer thickness  $>0,38$ mm and breakthrough-time  $>480$ min

Glove material: Neopren with breakthrough time:  $>240$  min, layer thickness:  $>0,65$  mm

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

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## Safety Data Sheet

### according to 1907/2006/EC, Article 31

Printing date 10.05.2010

version no: 1

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Trade name: **COLORTEC C-41 Colour Developer Part 3**

(Contd. of page 3)

· **Eye protection:**

Tightly sealed goggles

· **Body protection:** Protective work clothing

## 9 Physical and chemical properties

· **General Information**

<b>Form:</b>	Fluid
<b>Colour:</b>	Yellow
<b>Odour:</b>	Odourless

· **Change in condition****Melting point/Melting range:** Undetermined.**Boiling point/Boiling range:** Undetermined.· **Flash point:** Not applicable.· **Self-igniting:** Product is not selfigniting.· **Danger of explosion:** Product does not present an explosion hazard.· **Vapour pressure at 20°C:** 23 hPa· **Density at 20°C:** 1.302 g/cm<sup>3</sup>· **Solubility in / Miscibility with water:** Fully miscible.· **pH-value at 20°C:** 11.2· **Solvent content:****Organic solvents:** 0.0 %**Water:** 37.9 %

## 10 Stability and reactivity

· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.· **Materials to be avoided:**· **Dangerous reactions** No dangerous reactions known.· **Dangerous decomposition products:** Irritant gases/vapours

## 11 Toxicological information

· **Acute toxicity:**· **Primary irritant effect:**· **on the skin:** Irritant to skin and mucous membranes.· **on the eye:** Irritating effect.· **Sensitization:** No sensitizing effects known.· **Additional toxicological information:**

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

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## Safety Data Sheet

### according to 1907/2006/EC, Article 31

Printing date 10.05.2010

version no: 1

Revision: 07.05.2010

Trade name: **COLORTEC C-41 Colour Developer Part 3**

Irritant

(Contd. of page 4)

### 12 Ecological information

- **Additional ecological information:**

- **General notes:**

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

Rinse off of bigger amounts into drains or the aquatic environment may lead to increased pH-values. A high pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably reduced, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.

### 13 Disposal considerations

- **Product:**

- **Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

- **European waste catalogue**

09 01 01	water-based developer and activator solutions
----------	---

- **Uncleaned packaging:**

- **Recommendation:** Disposal must be made according to official regulations.

- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

### 14 Transport information

- **Land transport ADR/RID (cross-border)**

- **ADR/RID class:** -

- **Maritime transport IMDG:**

- **IMDG Class:** -

- **Marine pollutant:** No

- **Air transport ICAO-TI and IATA-DGR:**

- **ICAO/IATA Class:** -

- **UN "Model Regulation":** -

### 15 Regulatory information

- **Labelling according to EU guidelines:**

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.

- **Code letter and hazard designation of product:**



Xi Irritant

- **Risk phrases:**

36/38 Irritating to eyes and skin.

- **Safety phrases:**

2 Keep out of the reach of children.

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## Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date 10.05.2010

version no: 1

Revision: 07.05.2010

**Trade name: COLORTEC C-41 Colour Developer Part 3**

(Contd. of page 5)

26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

29 Do not empty into drains.

46 If swallowed, seek medical advice immediately and show this container or label.

### 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant R-phrases**

36 Irritating to eyes.

36/38 Irritating to eyes and skin.

· **Department issuing MSDS:** Department product safety

· **Contact:** e-mail: sida@tetenal.com

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

· **\* Data compared to the previous version altered.**

GB

## Safety Data Sheet

### according to 1907/2006/EC, Article 31

Printing date 10.05.2010

version no: 1

Revision: 07.05.2010

### 1 Identification of the substance/preparation and of the company/undertaking

- **Product details**

- **Trade name:** COLORTEC E-6/C-41 Bleachfix bath BX Part 1

- **Article number:**

44020, zu102034BXPart1, zu102226BXPart1, zu102228BXPart1, zu102031BXPart1, 6722/1 Part 1

- **Application of the substance / the preparation** Bleachfix preparation for photographic use

- **Manufacturer/Supplier:**

TETENAL AG & CO. KG

Schützenwall 31-35

D-22844 Norderstedt / Germany

Tel.: +49 040 521 45-0

Fax: +49 040-52145-296

www.tetenal.com

E-mail: info@tetenal.com

TETENAL LTD., Unit 1, Foxholes Road

Leicester LE3 1TH / Great Britain

Tel.: +44 0870 460 8996 Fax: +44 0870 460 8997, e.mail: uk@tetenal.com, www.tetenal.co.uk

- **Further information obtainable from:** Department environment and safety. E-mail: info@tetenal.com

- **Information in case of emergency:** Poison Information Centre Berlin (Germany): +49 (0) 30 - 30686 790

### 2 Hazards identification

- **Hazard description:** Not applicable.

- **Information concerning particular hazards for human and environment:**

The product does not have to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

- **Classification system:**

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

- **GHS label elements** Void

### 3 Composition/information on ingredients

- **Chemical characterization**

- **Description:** Mixture of substances listed below with nonhazardous additions.

- **Dangerous components:**

CAS: 21265-50-9

EINECS: 244-302-2

Ethylenediaminetetraacetic acid, ferric ammonium complex

25-50%

- **Additional information:** For the wording of the listed risk phrases refer to section 16.

### 4 First aid measures

- **General information:** Immediately remove any clothing/shoes soiled by the product.

- **After inhalation:** Supply fresh air; consult doctor in case of complaints.

- **After skin contact:** Immediately rinse with water.

- **After eye contact:** Rinse opened eye for several (15 min) under running water.

- **After swallowing:**

Rinse out mouth and then drink plenty of water.

If symptoms persist consult doctor.

GB

(Contd. on page 2)

## Safety Data Sheet

### according to 1907/2006/EC, Article 31

Printing date 10.05.2010

version no: 1

Revision: 07.05.2010

Trade name: COLORTEC E-6/C-41 Bleachfix bath BX Part 1

(Contd. of page 1)

### 5 Fire-fighting measures

- **Suitable extinguishing agents:**  
CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Protective equipment:** No special measures required.

### 6 Accidental release measures

- **Person-related safety precautions:** Ensure adequate ventilation
- **Measures for environmental protection:**  
Dilute with plenty of water.  
Do not allow to enter sewers/ surface or ground water.
- **Measures for cleaning/collecting:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **Additional information:** No dangerous substances are released.

### 7 Handling and storage

- **Handling:**
- **Information for safe handling:** No special measures required.
- **Information about fire - and explosion protection:** No special measures required.
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Store away from foodstuffs.
- **Further information about storage conditions:**  
Store under lock and key and out of the reach of children.  
Recommended storage temperature: 5-25°C

### 8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Ingredients with limit values that require monitoring at the workplace:**  
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists valid during the making were used as basis.
- **Personal protective equipment:**
- **General protective and hygienic measures:** Avoid contact with the skin.
- **Respiratory protection:** Not required.
- **Protection of hands:**  
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.  
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- **Material of gloves**  
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
- **Penetration time of glove material**  
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

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GB

## Safety Data Sheet

### according to 1907/2006/EC, Article 31

Printing date 10.05.2010

version no: 1

Revision: 07.05.2010

**Trade name: COLORTEC E-6/C-41 Bleachfix bath BX Part 1**

(Contd. of page 2)

- Glove material: Butyl rubber with breakthrough-time:  $\geq 480$  min, layer thickness:  $\geq 0,4$  mm  
 Glove material: Neopren with breakthrough time:  $>240$  min, layer thickness:  $>0,65$  mm  
 Gloves made of nitrile rubber with layer thickness  $>0,38$ mm and breakthrough-time  $>480$ min  
 · **Eye protection:** Safety glasses  
 · **Body protection:** Protective work clothing

## 9 Physical and chemical properties

### · General Information

<b>Form:</b>	Fluid
<b>Colour:</b>	Dark red
<b>Odour:</b>	Odourless

### · Change in condition

**Melting point/Melting range:** Undetermined.  
**Boiling point/Boiling range:**  $> 100^{\circ}\text{C}$

· **Flash point:** Not applicable.

· **Self-igniting:** Product is not selfigniting.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Vapour pressure at  $20^{\circ}\text{C}$ :** 23 hPa

· **Density at  $20^{\circ}\text{C}$ :**  $1.24 \text{ g/cm}^3$

· **Solubility in / Miscibility with water:** Fully miscible.

· **pH-value at  $20^{\circ}\text{C}$ :** 6.8

### · Solvent content:

<b>Organic solvents:</b>	0.7 %
<b>Water:</b>	59.6 %

## 10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Materials to be avoided:**
- **Dangerous reactions** No dangerous reactions known.
- **Dangerous decomposition products:** Irritant gases/vapours

## 11 Toxicological information

- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**  
 The product is not subject to classification according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version.

(Contd. on page 4)

GB

## Safety Data Sheet

### according to 1907/2006/EC, Article 31

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**Trade name: COLORTEC E-6/C-41 Bleachfix bath BX Part 1**

(Contd. of page 3)

When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.

#### 12 Ecological information

- **Additional ecological information:**
- **General notes:** Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

#### 13 Disposal considerations

- **Product:**
- **Recommendation**  
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

##### · **European waste catalogue**

09 01 05	bleach solutions and bleach fixer solutions
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- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

#### 14 Transport information

- **Land transport ADR/RID (cross-border)**
- **ADR/RID class:** -

- **Maritime transport IMDG:**
- **IMDG Class:** -
- **Marine pollutant:** No

- **Air transport ICAO-TI and IATA-DGR:**
- **ICAO/IATA Class:** -

- **UN "Model Regulation":** -

#### 15 Regulatory information

- **Labelling according to EU guidelines:**  
Observe the general safety regulations when handling chemicals.  
The product is not subject to identification regulations under EU Directives and the Ordinance on Hazardous Materials (German GefStoffV).

#### 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing MSDS:** Department product safety
- **Contact:** e-mail: sida@tetenal.com
- **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

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**Safety Data Sheet**  
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**Trade name: COLORTEC E-6/C-41 Bleachfix bath BX Part 1**

(Contd. of page 4)

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

. \* **Data compared to the previous version altered.**

GB

## Safety Data Sheet according to 1907/2006/EC, Article 31

Printing date 10.05.2010

version no: 1

Revision: 07.05.2010

### 1 Identification of the substance/preparation and of the company/undertaking

- **Product details**

- **Trade name:** COLORTEC E-6/C-41 Bleachfix bath BX Part 2

- **Article number:**

44021, zu102034BXPart2, zu102228BXPart2, zu102046Part2, zu102031BXPart2, zu102226BXPart2, 6722/1 Part 2

- **Application of the substance / the preparation** Bleachfix preparation for photographic use

- **Manufacturer/Supplier:**

TETENAL AG & CO. KG

Schützenwall 31-35

D-22844 Norderstedt / Germany

Tel.: +49 040 521 45-0

Fax: +49 040-52145-296

www.tetenal.com

E-mail: info@tetenal.com

TETENAL LTD., Unit 1, Foxholes Road

Leicester LE3 1TH / Great Britain

Tel.: +44 0870 460 8996 Fax: +44 0870 460 8997, e.mail: uk@tetenal.com, www.tetenal.co.uk

- **Further information obtainable from:** Department environment and safety. E-mail: info@tetenal.com

- **Information in case of emergency:** Poison Information Centre Berlin (Germany): +49 (0) 30 - 30686 790

### 2 Hazards identification

- **Hazard description:** Not applicable.

- **Information concerning particular hazards for human and environment:**

The product does not have to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

- **Classification system:**

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

- **GHS label elements**



**Danger**

H318 - Causes serious eye damage.

Safety data sheet available on request.

- **Prevention:**

P280 Wear protective gloves/protective clothing/eye protection/face protection.

- **Response:**

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER or doctor/physician.

### 3 Composition/information on ingredients

- **Chemical characterization**

- **Description:** Mixture of substances listed below with nonhazardous additions.

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GB

## Safety Data Sheet

### according to 1907/2006/EC, Article 31

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version no: 1

Revision: 07.05.2010

Trade name: COLORTEC E-6/C-41 Bleachfix bath BX Part 2

(Contd. of page 1)

**· Dangerous components:**

CAS: 7681-57-4 EINECS: 231-673-0	disodium disulphite	 Xn,  Xi; R 22-31-41	1-5%
		Danger:  3.3/1	
		Warning:  3.1.O/4	
CAS: 64-19-7 EINECS: 200-580-7	acetic acid	 C; R 10-35	0.5-2%
		Danger:  3.2/1A	
		Warning:  2.6/3	

· **Additional information:** For the wording of the listed risk phrases refer to section 16.

#### 4 First aid measures

- **General information:** No special measures required.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Immediately rinse with water.
- **After eye contact:** Rinse opened eye for several (15 min) under running water.
- **After swallowing:**  
If symptoms persist consult doctor.  
Rinse out mouth and then drink plenty of water.

#### 5 Fire-fighting measures

- **Suitable extinguishing agents:**  
CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards caused by the substance, its products of combustion or resulting gases:**  
Nitrogen oxides (NO<sub>x</sub>)  
Sulphur dioxide (SO<sub>2</sub>)
- **Protective equipment:** No special measures required.

#### 6 Accidental release measures

- **Person-related safety precautions:** Ensure adequate ventilation
- **Measures for environmental protection:**  
Dilute with plenty of water.  
Do not allow to enter sewers/ surface or ground water.
- **Measures for cleaning/collecting:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Pick up mechanically.
- **Additional information:** No dangerous substances are released.

#### 7 Handling and storage

- **Handling:**
- **Information for safe handling:** No special measures required.
- **Information about fire - and explosion protection:** No special measures required.
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Store away from foodstuffs.
- **Further information about storage conditions:**  
Protect from heat and direct sunlight.  
Store under lock and key and out of the reach of children.

(Contd. on page 3)

## Safety Data Sheet

### according to 1907/2006/EC, Article 31

Printing date 10.05.2010

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Revision: 07.05.2010

Trade name: COLORTEC E-6/C-41 Bleachfix bath BX Part 2

Recommended storage temperature: 5-25°C

(Contd. of page 2)

## 8 Exposure controls/personal protection

· **Additional information about design of technical facilities:** No further data; see item 7.

· **Ingredients with limit values that require monitoring at the workplace:**

**7681-57-4 disodium disulphite (1-5 %)**

WEL Long-term value: 5 mg/m<sup>3</sup>

· **Additional information:** The lists valid during the making were used as basis.

· **Personal protective equipment:**

· **General protective and hygienic measures:**

The usual precautionary measures are to be adhered to when handling chemicals.

Avoid contact with the eyes and skin.

· **Respiratory protection:** Ensure adequate ventilation

· **Protection of hands:**

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Butyl rubber, BR

Nitrile rubber, NBR

Neoprene gloves

· **Penetration time of glove material**

Glove material: Butyl rubber with breakthrough-time:  $\geq 480$  min, layer thickness:  $\geq 0,4$  mm

Gloves made of nitrile rubber with layer thickness  $>0,38$ mm and breakthrough-time  $>480$ min

Glove material: Neopren with breakthrough time:  $>240$  min, layer thickness:  $>0,65$  mm

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:** Safety glasses

· **Body protection:** Protective work clothing

## 9 Physical and chemical properties

· **General Information**

<b>Form:</b>	Fluid
<b>Colour:</b>	Light yellow
<b>Odour:</b>	Recognizable

· **Change in condition**

**Melting point/Melting range:** Undetermined.

**Boiling point/Boiling range:**  $> 100^{\circ}\text{C}$

· **Flash point:** Not applicable.

· **Self-igniting:** Product is not selfigniting.

· **Danger of explosion:** Product does not present an explosion hazard.

(Contd. on page 4)

## Safety Data Sheet

### according to 1907/2006/EC, Article 31

Printing date 10.05.2010

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Trade name: COLORTEC E-6/C-41 Bleachfix bath BX Part 2

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· Vapour pressure at 20°C:	23 hPa
· Density at 20°C:	1.346 g/cm <sup>3</sup>
· Solubility in / Miscibility with water:	Fully miscible.
· pH-value at 20°C:	5.4
· Solvent content:	
Organic solvents:	1.4 %
Water:	41.7 %

### 10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Materials to be avoided:**
- **Dangerous reactions:** No dangerous reactions known.
- **Dangerous decomposition products:** Irritant gases/vapours

### 11 Toxicological information

- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**  
The product is not subject to classification according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version.  
When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.

### 12 Ecological information

- **Additional ecological information:**
- **General notes:**  
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water  
Do not allow product to reach ground water, water course or sewage system.

### 13 Disposal considerations

- **Product:**
- **Recommendation**  
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

#### European waste catalogue

09 01 05	bleach solutions and bleach fixer solutions
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- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

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GB

## Safety Data Sheet

### according to 1907/2006/EC, Article 31

Printing date 10.05.2010

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Revision: 07.05.2010

**Trade name: COLORTEC E-6/C-41 Bleachfix bath BX Part 2**

 · **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

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#### 14 Transport information

 · **Land transport ADR/RID (cross-border)**  
 · **ADR/RID class:** -

 · **Maritime transport IMDG:**  
 · **IMDG Class:** -  
 · **Marine pollutant:** No

 · **Air transport ICAO-TI and IATA-DGR:**  
 · **ICAO/IATA Class:** -

 · **UN "Model Regulation":** -

#### 15 Regulatory information

 · **Labelling according to EU guidelines:**

Observe the general safety regulations when handling chemicals.

The product is not subject to identification regulations under EU Directives and the Ordinance on Hazardous Materials (German GefStoffV).

 · **Special labelling of certain preparations:**

Safety data sheet available for professional user on request.

#### 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

 · **Relevant R-phrases**

10 Flammable.

22 Harmful if swallowed.

31 Contact with acids liberates toxic gas.

35 Causes severe burns.

41 Risk of serious damage to eyes.

 · **Department issuing MSDS:** Department product safety

 · **Contact:** e-mail: sida@tetenal.com

 · **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

 · **\* Data compared to the previous version altered.**

# Safety Data Sheet

## according to 1907/2006/EC, Article 31

Printing date 10.05.2010

version no: 1

Revision: 07.05.2010

### 1 Identification of the substance/preparation and of the company/undertaking

· **Product details**

· **Trade name:** C-41 Stabilizer and Replenisher STAB-BNP

· **Article number:** 45544, zu102228 STAB, 6713/11

· **Application of the substance / the preparation** Stabilizer bath for photographic use

· **Manufacturer/Supplier:**

TETENAL AG & CO. KG

Schützenwall 31-35

D-22844 Norderstedt / Germany

Tel.: +49 040 521 45-0

Fax: +49 040-52145-296

www.tetenal.com

E-mail: info@tetenal.com

TETENAL LTD., Unit 1, Foxholes Road

Leicester LE3 1TH / Great Britain

Tel.: +44 0870 460 8996 Fax: +44 0870 460 8997, e.mail: uk@tetenal.com, www.tetenal.co.uk

· **Further information obtainable from:** Department environment and safety. E-mail: info@tetenal.com

· **Information in case of emergency:** Poison Information Centre Berlin (Germany): +49 (0) 30 - 30686 790

### 2 Hazards identification

· **Hazard description:**



Xn Harmful

· **Information concerning particular hazards for human and environment:**

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

R 42/43 May cause sensitisation by inhalation and skin contact.

· **Classification system:**

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

· **GHS label elements**



**Danger**

H318 - Causes serious eye damage.



**Warning**

H317 - May cause an allergic skin reaction.

· **Prevention:**

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

· **Response:**

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER or doctor/physician.

P321 Specific treatment (see on this label).

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## Safety Data Sheet

### according to 1907/2006/EC, Article 31

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**Trade name: C-41 Stabilizer and Replenisher STAB-BNP**

(Contd. of page 1)

















**· Disposal:**

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

### 3 Composition/information on ingredients

**· Chemical characterization**
**· Description:** Mixture of substances listed below with nonhazardous additions.

**· Dangerous components:**

CAS: 68131-39-5 Polymer	Alcohols, C12-15, ethoxylated  Xn,  Xi,  N; R 22-41-50 Danger:  3.3/1 Warning:  4.1.A/1;  3.1.O/4, 3.1.I/4	1-5%
CAS: 100-97-0 EINECS: 202-905-8	Hexamethylenetetramine  Xi,  F; R 11-43 Warning:  2.7/2;  3.4.S/1	1-5%
CAS: 2634-33-5 EINECS: 220-120-9	1,2-benzisothiazolin-3-one  Xn,  Xi,  N; R 22-38-41-43-50 Danger:  3.3/1 Warning:  4.1.A/1;  3.1.O/4, 3.4.S/1; 3.2/2	0.05-2%

**· Additional information:** For the wording of the listed risk phrases refer to section 16.

### 4 First aid measures

**· General information:** Immediately remove any clothing/shoes soiled by the product.

**· After inhalation:**

 In case of unconsciousness place patient stably in side position for transportation.  
 Supply fresh air; consult doctor in case of complaints.

**· After skin contact:** Immediately wash with water and soap and rinse thoroughly.

**· After eye contact:**

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

**· After swallowing:** Drink plenty of water and provide fresh air. Call for a doctor immediately.

### 5 Fire-fighting measures

**· Suitable extinguishing agents:**

 CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

**· Special hazards caused by the substance, its products of combustion or resulting gases:**

Under certain fire conditions, traces of other toxic gases cannot be excluded.

**· Protective equipment:** No special measures required.

### 6 Accidental release measures

**· Person-related safety precautions:** Ensure adequate ventilation

**· Measures for environmental protection:** Do not allow to enter sewers/ surface or ground water.

**· Measures for cleaning/collecting:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Pick up mechanically.

Ensure adequate ventilation.

GB

(Contd. on page 3)

## Safety Data Sheet

### according to 1907/2006/EC, Article 31

Printing date 10.05.2010

version no: 1

Revision: 07.05.2010

Trade name: C-41 Stabilizer and Replenisher STAB-BNP

(Contd. of page 2)

## 7 Handling and storage

- **Handling:**
- **Information for safe handling:**
  - Ensure good ventilation/exhaustion at the workplace.
  - Prevent formation of aerosols.
- **Information about fire - and explosion protection:** Protect from heat.
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store only in the original receptacle.
- **Information about storage in one common storage facility:**
  - Store away from foodstuffs.
  - Store away from oxidizing agents.
- **Further information about storage conditions:**
  - Protect from heat and direct sunlight.
  - Store under lock and key and out of the reach of children.
  - Recommended storage temperature: 5-25°C

## 8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Ingredients with limit values that require monitoring at the workplace:**
  - The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists valid during the making were used as basis.
- **Personal protective equipment:**
- **General protective and hygienic measures:**
  - Immediately remove all soiled and contaminated clothing
  - Wash hands before breaks and at the end of work.
  - Do not inhale gases / fumes / aerosols.
  - Avoid contact with the eyes and skin.
- **Respiratory protection:**
  - In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
  - Not necessary if room is well-ventilated.
- **Protection of hands:**



Protective gloves

### Impervious gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

### Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Neoprene gloves

Butyl rubber, BR

Nitrile rubber, NBR

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## Safety Data Sheet

### according to 1907/2006/EC, Article 31

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**Trade name: C-41 Stabilizer and Replenisher STAB-BNP**

(Contd. of page 3)

**· Penetration time of glove material**
Glove material: Butyl rubber with breakthrough-time:  $\geq 480$  min, layer thickness:  $\geq 0,4$  mmGloves made of nitrile rubber with layer thickness  $>0,38$ mm and breakthrough-time  $>480$ minGlove material: Neopren with breakthrough time:  $>240$  min, layer thickness:  $>0,65$  mm

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

**· Eye protection:**


Tightly sealed goggles

**· Body protection:** Protective work clothing

## 9 Physical and chemical properties

**· General Information**

<b>Form:</b>	Fluid
<b>Colour:</b>	Light brown
<b>Odour:</b>	Amine-like

**· Change in condition**
**Melting point/Melting range:** Undetermined.**Boiling point/Boiling range:** Undetermined.
**· Flash point:** Not applicable.

**· Self-igniting:** Product is not selfigniting.

**· Danger of explosion:** Product does not present an explosion hazard.

**· Vapour pressure at 20°C:** 23 hPa

**· Density at 20°C:** 1.017 g/cm<sup>3</sup>
**· Solubility in / Miscibility with water:** Fully miscible.

**· pH-value at 20°C:** 9.7

**· Solvent content:**
**Organic solvents:** 0.0 %**Water:** 91.3 %

## 10 Stability and reactivity

**· Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

**· Materials to be avoided:**
**· Dangerous reactions** Reacts with acids, alkalis and oxidizing agents.

**· Dangerous decomposition products:** Irritant gases/vapours

## 11 Toxicological information

**· Acute toxicity:**
**· Primary irritant effect:**
**· on the skin:** No irritant effect.

**· on the eye:** No irritating effect.

(Contd. on page 5)

## Safety Data Sheet

### according to 1907/2006/EC, Article 31

Printing date 10.05.2010

version no: 1

Revision: 07.05.2010

**Trade name: C-41 Stabilizer and Replenisher STAB-BNP**

(Contd. of page 4)

- **Sensitization:** Sensitization possible through skin contact.
- **Additional toxicological information:**  
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:  
Irritant
- **Sensitisation** May cause sensitisation by inhalation and skin contact.

### 12 Ecological information

- **Additional ecological information:**
- **General notes:**  
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water  
Do not allow product to reach ground water, water course or sewage system.

### 13 Disposal considerations

- **Product:**
- **Recommendation**  
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

- **European waste catalogue**

09 01 99	wastes not otherwise specified
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- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

### 14 Transport information

- **Land transport ADR/RID (cross-border)**
- **ADR/RID class:** -

- **Maritime transport IMDG:**
- **IMDG Class:** -
- **Marine pollutant:** No

- **Air transport ICAO-TI and IATA-DGR:**
- **ICAO/IATA Class:** -

- **UN "Model Regulation":** -

\*

### 15 Regulatory information

- **Labelling according to EU guidelines:**  
The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.

- **Code letter and hazard designation of product:**



Xn Harmful

- **Hazard-determining components of labelling:**  
Hexamethylenetetramine

(Contd. on page 6)

-GB-

## Safety Data Sheet

### according to 1907/2006/EC, Article 31

Printing date 10.05.2010

version no: 1

Revision: 07.05.2010

**Trade name: C-41 Stabilizer and Replenisher STAB-BNP**

1,2-benzisothiazolin-3-one

(Contd. of page 5)

**· Risk phrases:**

42/43 May cause sensitisation by inhalation and skin contact.

**· Safety phrases:**

23 Do not breathe gas/fumes/vapour/spray (appropriate wording to be specified by the manufacturer).

24 Avoid contact with skin.

37 Wear suitable gloves.

45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

60 This material and its container must be disposed of as hazardous waste.

## 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

**· Relevant R-phrases**

11 Highly flammable.

22 Harmful if swallowed.

38 Irritating to skin.

41 Risk of serious damage to eyes.

43 May cause sensitisation by skin contact.

50 Very toxic to aquatic organisms.

**· Department issuing MSDS:** Department product safety

**· Contact:** e-mail: sida@tetenal.com

**· Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

**· \* Data compared to the previous version altered.**

GB

# FREESTYLE PHOTOGRAPHIC SUPPLIES

## MARATHON FIXER

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Distributor: Freestyle Photographic Supplies

5124 Sunset Blvd., Hollywood, CA 90027

Product Name: **MARATHON FIXER**

Product Number: **146200**

**Product Use:** Photographic fixer

**Customer Information Phone Number:**

1-800-292-6137

**CHEMTREC®: 24 Hour Emergency Transport Phone Number: 1-800-424-9300**

Date Reviewed: 7/20/2015

Version: 2.0

### 2. HAZARDOUS IDENTIFICATION

#### 2.1 Classification of the substance or mixture

##### Health hazard

Causes eye irritation (Category 2B), H320

Causes skin irritation (Category 2), H314

#### 2.2 GHS Label elements, including precautionary statements

##### Pictogram



**Signal Word: WARNING**

##### Hazard statement(s)

H305 May be harmful if swallowed and enters airways/

H314 Causes skin irritation

H317 May cause allergic skin reaction

H320 Causes eye irritation

H335 May cause respiratory irritation

##### Precautionary statement(s)

P261 Avoid breathing mist

P264 Wash skin thoroughly after handling

P270 Do not eat, drink, or smoke when using this product

P280 Wear protective gloves, eye protection

P301 + P312 IF SWALLOWED; call a POISON CENTER or doctor/physician if you feel unwell

P302 + P352 IF ON SKIN: Wash with plenty of soap

# MATERIAL SAFETY DATA SHEET



P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P321 Specific treatment (see supplemental first aid instructions on this label).  
P330 Rinse mouth.  
P333 +P313 If skin irritation or rash occurs: Get medical advice/attention.  
P363 Wash contaminated clothing before reuse  
P391 Collect spillage  
P501 Dispose of contents to an approved waste disposal plant.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS	OHSA PEL	ACGIH TLV	Weight %
AMMONIUM THIOSULFATE	7783-18-8	N.E.	N.E.	65-75
SODIUM SULFITE	7757-83-7	N.E.	5 mg/m <sup>3</sup>	5-10
ACETIC ACID	64-19-7	25mg/m <sup>3</sup>	5 mg/m <sup>3</sup>	1-5
SODIUM THIOSULFATE	10102-17-7	N.E.	N.E.	1-3

## 4. FIRST AID MEASURES

### 4.1 Description of first aid measures

**Eye Contact:** Immediately flush eyes with plenty of water for at least 15 minutes while holding eyelids apart. DO NOT remove contact lenses, if worn. Get immediate medical attention.

**Inhalation:** If symptomatic, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

**Ingestion:** Seek medical attention or contact a poison control center for advice about whether to induce vomiting. If conscious, give two glasses of water. If individual is drowsy or unconscious, do not give anything by mouth. Place individual on left side with head down.

**Skin Contact:** Flush skin with plenty of water and wash with a non-alkaline skin cleaner. Wash contaminated clothes before reuse. Get medical attention if irritation develops.

**Aggravated Medical Conditions:** Skin contact may aggravate an existing dermatitis.

## 5. FIRE FIGHTING MEASURES

### 5.1 Extinguishing media

Nonflammable -Use agent appropriate for surrounding fire.

### 5.2 Special Hazards arising from substance or mixture

Fire or excessive heat may cause production of hazardous decomposition products.  
Combustion Products: Carbon dioxide, carbon monoxide, and oxides of sulfur and nitrogen.

### 5.3 Advise for firefighters

Wear self-contained breathing NIOSH/MSHA approved apparatus and protective clothing to prevent contact with skin and eyes.

## **6. ACCIDENTAL RELEASE MEASURES**

### **6.1 Personal precautions, protective equipment and emergency procedures**

Review fire and explosion hazards and safety precautions before proceeding with cleanup. Use appropriate personal protective equipment. Avoid contact with skin and eyes. Stop the spillage. Dike the spill. For small amounts less than one gallon flush to the sewer with large amounts of water. For larger spills, prevent liquid from entering sewers, waterways or low areas. Absorb spillage in inert material. Soak up with sawdust, sand, or other absorbent material. Remove non-usable solid material and/or contaminated soil for disposal in an approved and permitted landfill.

### **6.2 Environmental precautions**

Prevent liquid from entering sewers, waterways or low areas. Discharge to sewer requires approval of permitting authority and may require pre-treatment. Contaminated surfaces should be cleaned using water.

## **7. HANDLING AND STORAGE**

### **7.1 Precautions for safe handling**

Store in a cool, dry, well-ventilated area. Keep containers closed. Do not store or consume food, drink, or tobacco where they may become contaminated with this material.

### **7.2 Conditions for safe storage, including any incompatibles**

Do not store with incompatible materials. All labeled precautions must be observed when handling, storing and transporting empty containers due to product residues. Triple rinse before disposal. Dispose of in a licensed facility.

## **8. EXPOSURE CONTROL / PERSONAL PROTECTION**

### **8.1 Control parameters**

See Section 3.

### **8.2 Exposure controls**

Use good personal hygiene when handling this product. Wash hands after use, before smoking, or using the toilet. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

#### **Personal protective equipment**

**Eye Protection:** Safety glasses with side shields (or goggles).

**Respiratory Protection:** When this product is used in the intended way, no respiratory protection is anticipated to be necessary.

**Skin protection:** Latex, rubber, or neoprene waterproof gloves are recommended.

**Body protection:** Rubber or plastic apron.

**Ventilation protection:** Local exhaust ventilation is recommended. Ventilation must be adequate to keep hazardous ingredients below their exposure limits.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

Appearance And Odor: Clear, slightly yellow, vinegar odor.

Solubility In Water: Complete

Boiling Point: >100° C

Flash Point: Nonflammable

Vapor Pressure: 18mm Hg @ 20° C

Ph: 5.28

Specific Gravity: 1.37 g/ml

Melting Point: Not applicable

Freezing Point: Not established

Evaporation Rate: Not established

Percent Volatile: 39.81

Molecular Weight: Not applicable

Pounds Per Gallon: 11.41

V.O.C. is 78.70 g/L or 5.7 % or 0.66 lb. /gal.

## 10. STABILITY AND REACTIVITY

### 10.1 Reactivity

Stable

### 10.2 Chemical stability

Conditions To Avoid: None

### 10.3 Possibility of hazardous reactions

No data available

### 10.4 Conditions to avoid

No data available

### 10.5 Incompatible Materials

Strong acids will liberate sulfur dioxide. Strong bases of sodium hydroxide will liberate ammonia fumes.

### 10.6 Decomposition Products

May produce oxides of sulfur and ammonia.

## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information of toxicological effects

#### Component information

#### ***Ammonium thiosulfate 7783-18-8***

#### **Acute toxicity:**

Oral: LD50 (rats): 2,890 mg/kg

Dermal: No data

# MATERIAL SAFETY DATA SHEET



Inhalation: No data  
**Skin irritation:** Rabbit  
Non irritant  
**Eye irritation:** Rabbit  
No eye irritation (OECD Test Guideline 405).

**Carcinogenicity/mutagenicity:** none

## ***Sodium Sulfite 7757-83-7***

### **Acute toxicity:**

Oral LD-50 (rat) 3, 560 mg/kg  
Inhalation LC-50 (rabbit) >5.500 mg/kg - 4 h

Dermal: no data available

**Skin irritation:** Rabbit No skin irritation

**Eye irritation:** Rabbit Mild eye irritation

**Respiratory or Skin Sensitization** Prolonged or repeated exposure may cause allergic skin  
Reaction in certain sensitive individuals.

**Carcinogenicity/mutagenicity:** none

## ***Acetic Acid 64-19-7***

### **Acute toxicity:**

Oral: LD50 (rats): 3,310 mg/kg  
Dermal: LD50 (Rabbit) – 4h – 11.4 mg/l  
Inhalation: LC50 (Mouse) – 1h – 5620 ppm  
LC50 (Rat) – 4h -11.4 mg/l

**Skin irritation:** No data available

**Eye irritation:** Rabbit  
Corrosive to eyes

**Respiratory or skin sensitization** No data available

**Carcinogenicity/mutagenicity:** none

**Reproductive toxicity:** No data available

**Specific target organ toxicity – repeated exposure –** No data available

**Aspiration hazard -** No data available

## ***Sodium Thiosulfate 10102-17-7***

*Not a hazardous substance. No toxicological data available.*

## **12. ECOLOGICAL INFORMATION**

### **Component information**

#### ***Ammonium thiosulfate 7783-18-8***

### **12.1 Toxicity**

Toxicity to fish LC0-Lepomis macrochirus (bluegill) - 510 mg/l – 96h  
Toxicity to daphnia and LC50 – Daphnia magna (Water flea) – 230 mg/l – 21d  
other aquatic invertebrates

Toxicity to algae EC50 – Pseudokirchneriella subcapitata - > 100 mg/l – 72 h  
(OECD Test Guideline 201).

Toxicity to bacteria Respiration inhibition EC50 – Sludge Treatment - > 1,000 mg/l – 3h (OECD Test Guideline 201).

## 12.2 Persistence and degradability

No data available

## 12.3 Bioaccumulative potential

No data available

## 12.4 Mobility in soil

No data available

## 12.5 Result of PBT and vPvB assessment

Assessment not available as chemical assessment not required/not conducted

### ***Sodium Sulfite 7757-83-7***

## 12.1 Toxicity

Toxicity to fish LC- Gambusia affinis (Mosquito fish) – 660 mg/l – 96h

## 12.2 Persistence and degradability

No data available

## 12.3 Bioaccumulative potential

No data available

## 12.4 Mobility in soil

No data available

### ***Acetic Acid 64-19-7***

## 12.1 Toxicity

Toxicity to fish LC0- Oncorhynchus mykiss (rainbow trout) - > 1,000 mg/l – 96h  
(OECD Test Guideline 203).

Toxicity to daphnia and other aquatic invertebrates LC50 – Daphnia magna (Water flea) – > 300.82mg/l – 48h  
(OECD Test Guideline 202).

## 12.2 Persistence and degradability

No data available

## 12.3 Bioaccumulative potential

Biodegradability aerobic – exposure time 30d  
Result: 99% - Readily biodegradable

Biochemical Oxygen Demand (BOD) 880 mg/g

**12.4 Mobility in soil**

No data available

**12.5 Result of PBT and vPvB assessment**

Assessment not available as chemical assessment not required/not conducted

**12.5 Result of PBT and vPvB assessment**

Assessment not available as chemical assessment not required/not conducted

**12.5 Other adverse effects**

No data available.

**Sodium Thiosulfate 10102-17-7**

*Not a hazardous substance. No ecological data available.*

**13. DISPOSAL CONSIDERATIONS****13.1 Waste treatment methods****Product**

Preferred options for disposal are to send to licensed reclaimers, or to permitted incinerators. Any disposal practice must be in compliance with federal, state, and local regulations. Do not dump into sewers, ground, or any body of water.

**14. TRANSPORT INFORMATION****DOT (US)**

Not regulated

**15. REGULATORY INFORMATION****SARA 302 Components**

The following components are subject to reporting levels established by SARA Title III, Section 302:  
None

**SARA 313 Components**

The following components are subject to reporting levels established by SARA Title III, Section 313:  
None

**SARA 311/312 Hazards**

Acute Health Hazard, Chronic Health Hazard

**California Prop 65 Components**

This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

**TSCA**

All ingredients in this finished product are listed on the EPA TSCA INVENTORY.

**SCAQMD Rule 443.1**

Photochemically Reactive: No  
Maximum Grams of VOC per Liter: 78.7 g/L  
Vapor Pressure: 18 mm Hg@ 20 Degrees C

**16. OTHER INFORMATION****Full text of H-statements referred to under sections 2 and 3.**

H305	May be harmful if swallowed and enters airways (Category 2)
H314	Causes skin irritation (Category 2)
H317	May cause allergic skin reaction (Category 1)
H320	Causes eye irritation (Category 2B)
H335	May cause respiratory irritation (Category 3)

**HMIS RATING**

Health: 1  
Flammability: 0  
Reactivity: 0  
Protective: C

OTHER ADDITIONAL INFORMATION: The information contained herein is based on the data available to us and is believed to be accurate. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof. We assume no responsibility for the injuries from the use of the product described herein.

# **LEGACYPRO ECO PRO B&W PAPER DEVELOPER (HYDROQUINONE-FREE)**

1. Identification of the substance/preparation and of the company/undertaking

**Product name:** ECO PRO B&W PAPER DEVELOPER

**Product code:** 123-1036, 123-1043 – PRINT DEVELOPER

**Distributor:** Digitaltruth Photo Ltd., 1321 Upland Dr. Ste. 2342, Houston, TX, 77043-4718 U.S.A.

**Product Use:** Photographic processing solution.

**Customer Information Phone Number:** 1-888-391-8922

**CHEMTREC®: 24 Hour Emergency Transport Phone Number:** 1-800-424-9300

**Manufacturer code:** 450022, 450200, 450407

Date Reviewed: 09/03/2015

Version: 3.0

## **2. HAZARDOUS IDENTIFICATION**

### **2.1 Classification of the substance or mixture**

#### **Health hazard**

Acute toxicity, Oral (Category 4), H303

Eye irritation (Category 4), H320

Skin sensitization (Category 1), H315

### **2.2 GHS Label elements, including precautionary statements**

#### **Pictogram**



**Signal Word: WARNING**

#### **Hazard statement(s)**

H303	May be harmful if swallowed
H315	May cause skin irritation
H320	Causes eye irritation
H335	May cause respiratory irritation

#### **Precautionary statement(s)**

P201	Obtain special instructions before use
P261	Avoid breathing mist/dust/spray.

## MATERIAL SAFETY DATA SHEET

P264 Wash skin thoroughly after handling  
P270 Do not eat, drink, or smoke when using this product  
P280 Wear protective gloves, eye protection  
P301 + P312 IF SWALLOWED; call a POISON CENTER or doctor/physician if you feel unwell  
P302 + P352 IF ON SKIN: Wash with plenty of soap  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.  
P337 + P313 If eye irritation persists: Get medical advice/attention.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS	OHSA PEL	ACGIH TLV	Weight %
POTASSIUM CARBONATE	584-08-7	N.E.	N.E.	10-25
SODIUM SULFITE	7757-83-7	5mg/m <sup>3</sup> *	5mg/m <sup>3</sup> *	5-10
SODIUM ERYTHORBATE	16381-77-7	N.E.	N.E.	5-10
TRIETHANOLAMINE	102-71-6	N.E.	5 mg/m <sup>3</sup> TWA	1-5

\* respirable dust

### 4. FIRST AID MEASURES

#### 4.1 Description of first aid measures

**Eye Contact:** Immediately flush eyes with plenty of water for at least 15 minutes. Get immediate medical attention.

**Inhalation:** If symptomatic, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

**Ingestion:** If swallowed, give victim a glass of water or milk. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

**Skin Contact:** Flush skin with plenty of water and wash with a non-alkaline skin cleaner. Wash contaminated clothes before reuse. Get medical attention if irritation develops.

**Aggravated Medical Conditions:** Individuals who are under the care of a physician or have chronic ailments, should consult a physician before using this product. May cause severe allergic reaction in some asthmatics and sulfite sensitive individuals.

### 5. FIRE FIGHTING MEASURES

#### 5.1 Extinguishing media

Nonflammable. Use water spray, carbon dioxide, dry chemical, or alcohol foam.

#### 5.2 Special Hazards arising from substance or mixture

Fire or excessive heat may cause production of hazardous decomposition products.  
Combustion Products: Carbon dioxide, carbon monoxide, and oxides of sulfur.

# MATERIAL SAFETY DATA SHEET

## 5.3 Advise for firefighters

Wear self-contained breathing NIOSH/MSHA approved apparatus and protective clothing to prevent contact with skin and eyes. Fire or excessive heat may produce hazardous decomposition products. Use water to keep containers cool.

## 6. ACCIDENTAL RELEASE MEASURES

### 6.1 Personal precautions, protective equipment and emergency procedures

Review fire and explosion hazards and safety precautions before proceeding with cleanup. Use appropriate personal protective equipment. Avoid contact with skin and eyes. Stop the spillage. Dike the spill. Prevent liquid from entering sewers, waterways or low areas. Absorb spillage in inert material. Soak up with sawdust, sand, or other absorbent material. Remove non-usable solid material and/or contaminated soil for disposal in an approved and permitted landfill.

### 6.2 Environmental precautions

Prevent liquid from entering sewers, waterways or low areas. Discharge to sewer requires approval of permitting authority and may require pre-treatment. Contaminated surfaces should be cleaned using water.

## 7. HANDLING AND STORAGE

### 7.1 Precautions for safe handling

Avoid breathing mist or vapor. Do not get in eyes and avoid skin contact. Store in a cool, dry, well ventilated area. Keep containers closed. Do not store with incompatible materials. Do not store or consume food, drink, or tobacco where they may become contaminated with this material.

### 7.2 Conditions for safe storage, including any incompatibles

Do not store with incompatible materials. Do not store with strong acids. All labeled precautions must be observed when handling, storing and transporting empty containers due to product residues. Triple rinse before disposal. Dispose of in a licensed facility.

## 8. EXPOSURE CONTROL / PERSONAL PROTECTION

### 8.1 Control parameters

See Section 3.

### 8.2 Exposure controls

Use good personal hygiene when handling this product. Wash hands after use, before smoking, or using the toilet. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

### Personal protective equipment

**Eye Protection:** Safety glasses with side shields (or goggles).

**Respiratory Protection:** When this product is used in the intended way, no respiratory protection is anticipated to be necessary. A respirator should be worn if hazardous decomposition products are likely to be released. Respirator type: Acid gas.

# MATERIAL SAFETY DATA SHEET

**Skin protection:** Latex, rubber, or neoprene waterproof gloves are recommended.

**Body protection:** Rubber or plastic apron.

**Respiratory protection:** Local exhaust ventilation is recommended. Ventilation must be adequate to keep hazardous ingredients below their exposure limits.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

Appearance And Odor: Light straw color; no odor.

Solubility In Water: Complete

Boiling Point: > 212° F

Flash Point: Nonflammable

Vapor Pressure: Not established

Ph (Working Solution) 10.35

Specific Gravity: 1.25 g /ml

Melting Point: Not applicable

Freezing Point: Not established

Evaporation Rate: < 1

Vapor Density: Not established

Percent Volatile: 68.75

Molecular Weight: Not applicable

Pounds Per Gallon: 10.4

V.O.C is 0.

## 10. STABILITY AND REACTIVITY

### 10.1 Reactivity

Data not available

### 10.2 Chemical stability

Stable

### 10.3 Possibility of hazardous reactions

No data available

### 10.4 Conditions to avoid

Heat

### 10.5 Incompatible Materials

Strong acids will liberate sulfur dioxide, carbon dioxide.

### 10.6 Decomposition Products

May produce oxides of sulfur and carbon

# MATERIAL SAFETY DATA SHEET

## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information of toxicological effects

#### Component information

##### **Potassium Carbonate 584-08-7**

###### **Acute toxicity:**

LD50 Oral – rate – 1970 mg/kg

Dermal: No data available

Inhalation: No data available

**Skin irritation:** No data available

**Eye irritation:** No data available

**Respiratory or Skin Sensitization** No data available

**Carcinogenicity/mutagenicity:** none

##### **Sodium Sulfite 7757-83-7**

###### **Acute toxicity:**

Oral LD-50 (rat) 3,560 mg/kg

Inhalation LD-50 (rat) >5,500 mg/m<sup>3</sup> - 4 h

Dermal: no data

###### **Skin irritation:**

Skin – rabbit

Result: No skin irritation

###### **Eye irritation:**

Skin – rabbit

Result: No skin irritation

###### **Respiratory or Skin Sensitization**

Prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals.

**Carcinogenicity/mutagenicity:** none

##### **Sodium Erythroate 6381-77-7**

###### **Acute toxicity:**

Oral LD-50 (rat) 2400 mg/kg

Inhalation LD-50 (rat) No experimental data

Dermal: no data. Is expected to be greater than 2,000 mg/kg of body weight.

# MATERIAL SAFETY DATA SHEET

**Skin irritation:**

Probable skin irritant based on chemical properties (alkalinity).

**Eye irritation:**

Probable eye irritant.

**Respiratory or Skin Sensitization**

No experimental test data. However, other borates are not skin sensitizers.

**Carcinogenicity/mutagenicity:** none

**Reproductive toxicity** :Animal feeding studies in rat, mouse and dog, at high doses, have demonstrated effects on fertility and testes. The doses administered were many times in excess of those which humans would normally be exposed to.

***Triethanolamine 102-71-6*****Acute toxicity:**

Oral: LD50 (Mouse): 5,846 mg/kg

Oral: LD50 (Rat): 5,530 mg/kg

Oral: LD50 (Rabbit): 2,200 mg/kg

Dermal: LD50 (Rabbit) : >22.5 g/kg

Inhalation: No data available

**Skin irritation:** Rabbit  
Non irritant

**Eye irritation:** Rabbit  
No eye irritation

**Respiratory or skin sensitization:** No data available

**Carcinogenicity/mutagenicity:** none

## 12. ECOLOGICAL INFORMATION

### Component information

***Potassium Carbonate 584-08-7*****12.1 Toxicity**

Toxicity to fish LC50- Pimephales promelas (fathead minnow) -510 mg/l – 96h

**12.2 Persistence and degradability**

No data available

**12.3 Bioaccumulative potential**

No data available

# MATERIAL SAFETY DATA SHEET

## 12.4 Mobility in soil

No data available

## 12.5 Result of PBT and vPvB assessment

Assessment not available as chemical assessment not required/not conducted

## 12.5 Other adverse effects

None

### ***Sodium Sulfite 7757-83-7***

## 12.1 Toxicity

Toxicity to fish

LC50- Gambusia affinis (Mosquito fish) -660 mg/l – 96h

## 12.2 Persistence and degradability

No data available

## 12.3 Bioaccumulative potential

No data available

## 12.4 Mobility in soil

No data available

## 12.5 Result of PBT and vPvB assessment

Assessment not available as chemical assessment not required/not conducted

## 12.5 Other adverse effects

None

### ***Sodium Erythrobate 6381-77-7***

## 12.1 Toxicity

No data available

## 12.2 Persistence and degradability

No data available

## 12.3 Bioaccumulative potential

No data available

## 12.4 Mobility in soil

No data available

## 12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

## 12.6 Other adverse effects

No data available

# MATERIAL SAFETY DATA SHEET

## **Triethanolamine 102-71-6**

### **12.1 Toxicity**

Toxicity to fish	LC0-Lepomis macrochirus (bluegill) – 450-1,000 mg/l – 96h
Toxicity to daphnia and other aquatic invertebrates	LC50 – Daphnia magna (Water flea) – 609.98 mg/l – 48 h

### **12.2 Persistence and degradability**

Biodegradability Result: 96% - Readily biodegradable

### **12.3 Bioaccumulative potential**

No data available

### **12.4 Mobility in soil**

No data available

### **12.5 Result of PBT and vPvB assessment**

Assessment not available as chemical assessment not required/not conducted

## **13. DISPOSAL CONSIDERATIONS**

### **13.1 Waste treatment methods**

#### **Product**

Preferred options for disposal are to send to licensed reclaimers, or to permitted incinerators. Any disposal practice must be in compliance with federal, state, and local regulations. Do not dump into sewers, ground, or any body of water.

## **14. TRANSPORT INFORMATION**

### **DOT (US)**

Not regulated

## **15. REGULATORY INFORMATION**

### **SARA 302 Components**

The following components are subject to reporting levels established by SARA Title III, Section 302: None

### **SARA 313 Components**

The following components are subject to reporting levels established by SARA Title III, Section 313: None

### **SARA 311/312 Hazards**

Acute Health Hazard

### **California Prop 65 Components**

This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

# MATERIAL SAFETY DATA SHEET

## TSCA

All ingredients in this finished product are listed on the EPA TSCA INVENTORY.

## SCAQMD Rule 443.1

Photochemically Reactive: No

Maximum Grams of VOC per Liter: 0 g/L

Vapor Pressure: 18 mm Hg@ 20 Degrees C

## 16. OTHER INFORMATION

**Full text of H-statements referred to under sections 2 and 3.**

Acute toxicity, Oral (Category 4), H303

Eye irritation (Category 4), H320

Skin sensitization (Category 1), H315

## HMIS RATING

Health: 1

Chronic:

Flammability: 0

Reactivity: 0

OTHER ADDITIONAL INFORMATION: The information contained herein is based on the data available to us and is believed to be accurate. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof. We assume no responsibility for the injuries from the use of the product described herein.

# FREESTYLE PHOTOGRAPHIC SUPPLIES

## LEGACY PRO

### L-76R POWDER FILM DEVELOPER/REPLENISHER

#### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Distributor: Freestyle Photographic Supplies

5124 Sunset Blvd., Hollywood, CA 90027

Product Name: **LEGACY PRO L-76-R FILM DEVELOPER/REPL POWDER**

Product Number: **735712**

**Product Use:** Photographic developer replenisher

**Customer Information Phone Number:** 1-800-292-6137

**CHEMTREC®: 24 Hour Emergency Transport Phone Number: 1-800-424-9300**

Date Reviewed: 02/27/2015

Version: 3.0

#### 2. HAZARDOUS IDENTIFICATION

##### 2.1 Classification of the substance or mixture

###### Health hazard

Acute toxicity, Oral (Category 4), H302

Serious eye irritation (Category 2), H319

Skin sensitization (Category 1), H317

Germ cell mutagenicity (Category 2), H341

Carcinogenicity (Category 2), H351

Specific organ toxicity Oral (Category 2), Kidney, H373

Acute aquatic toxicity (Category 1), H400

##### 2.2 GHS Label elements, including precautionary statements

###### Pictogram



**Signal Word: WARNING**

Hazard statement(s)

H302 Harmful if swallowed

H315 Causes skin irritation

H317 May cause allergic skin reaction

H318 Causes severe eye damage

H335 May cause respiratory irritation

H361 Suspected of causing genetic defects

# MATERIAL SAFETY DATA SHEET



H351 Suspected of causing cancer  
H373 Specific organ toxicity – repeated exposure, Oral (Category 2), Kidney  
H410 Very toxic to aquatic life

## Precautionary statement(s)

P201 Obtain special instructions before use  
P261 Avoid breathing mist  
P264 Wash skin thoroughly after handling  
P270 Do not eat, drink, or smoke when using this product  
P273 Avoid release into the environment  
P280 Wear protective gloves, eye protection  
P301 + P312 IF SWALLOWED; call a POISON CENTER or doctor/physician if you feel unwell  
P302 + P352 IF ON SKIN: Wash with plenty of soap  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P321 Specific treatment (see supplemental first aid instructions on this label).  
P330 Rinse mouth.  
P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.  
P337 + P313 If eye irritation persists: Get medical advice/attention.  
P363 Wash contaminated clothing before reuse  
P391 Collect spillage  
P501 Dispose of contents to an approved waste disposal plant.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS	OHSA PEL	ACGIH TLV	Weight %
SODIUM SULFITE	7757-83-7	5mg/m <sup>3</sup> *	5mg/m <sup>3</sup> *	70-80
BORAX	12179-04-3	5mg/m <sup>3</sup> *	10/m <sup>3</sup> *	10-15
HYDROQUINONE	123-31-9	2mg/m <sup>3</sup>	2mg/m <sup>3</sup>	5-10

\* respirable dust

## 4. FIRST AID MEASURES

### 4.1 Description of first aid measures

**Eye Contact:** Immediately flush eyes with plenty of water for at least 15 minutes. Get immediate medical attention.

**Inhalation:** If symptomatic, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

**Ingestion:** Do not induce vomiting. Only induce vomiting at the instruction of medical personnel. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

**Skin Contact:** Flush skin with plenty of water and wash with a non-alkaline skin cleaner. Wash contaminated clothes before reuse. Get medical attention if irritation develops.

**Aggravated Medical Conditions:** Individuals who are under the care of a physician or have chronic ailments, should consult a physician before using this product. May cause severe allergic reaction in some asthmatics and sulfite sensitive individuals.

## **5. FIRE FIGHTING MEASURES**

### **5.1 Extinguishing media**

Use agent appropriate for surrounding fire.

### **5.2 Special Hazards arising from substance or mixture**

Fire or excessive heat may cause production of hazardous decomposition products.

Combustion Products: Carbon dioxide, carbon monoxide, and oxides of sulfur.

### **5.3 Advise for firefighters**

Wear self-contained breathing NIOSH/MSHA approved apparatus and protective clothing to prevent contact with skin and eyes. Fire or excessive heat may produce hazardous decomposition products. Use water to keep containers cool.

## **6. ACCIDENTAL RELEASE MEASURES**

### **6.1 Personal precautions, protective equipment and emergency procedures**

Review fire and explosion hazards and safety precautions before proceeding with cleanup. Use appropriate personal protective equipment. Avoid contact with skin and eyes. Stop the spillage. Stop the spillage. Pick up and arrange disposal without creating dust. Sweep up and shovel. If in working solution dike the spill. Prevent liquid from entering sewers, waterways or low areas. Absorb spillage in inert material. Soak up with sawdust, sand, or other absorbent material. Remove non-usable solid material and/or contaminated soil for disposal in an approved and permitted landfill.

### **6.2 Environmental precautions**

Prevent liquid from entering sewers, waterways or low areas. Discharge to sewer requires approval of permitting authority and may require pre-treatment. Contaminated surfaces should be cleaned using water.

## **7. HANDLING AND STORAGE**

### **7.1 Precautions for safe handling**

Store in a cool, dry, well-ventilated area. Keep containers closed. Do not store or consume food, drink, or tobacco where they may become contaminated with this material.

### **7.2 Conditions for safe storage, including any incompatibles**

Do not store with incompatible materials. Do not store with strong acids. All labeled precautions must be observed when handling, storing and transporting empty containers due to product residues. Triple rinse before disposal. Dispose of in a licensed facility.

## **8. EXPOSURE CONTROL / PERSONAL PROTECTION**

### **8.1 Control parameters**

See Section 3.

### **8.2 Exposure controls**

Use good personal hygiene when handling this product. Wash hands after use, before smoking, or using the toilet. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

**Personal protective equipment**

**Eye Protection:** Safety glasses with side shields (or goggles).

**Respiratory Protection:** Avoid breathing dust. Wear approved dust filter respirator if TLV is to be exceeded. Use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls.

**Skin protection:** Latex, rubber, or neoprene waterproof gloves are recommended.

**Body protection:** Rubber or plastic apron.

**Respiratory protection:** Local exhaust ventilation is recommended. Ventilation must be adequate to keep hazardous ingredients below their exposure limits.

**9. PHYSICAL AND CHEMICAL PROPERTIES****9.1 Information on basic physical and chemical properties**

Appearance And Odor: Yellow solid, no odor

Solubility In Water: Complete

Boiling Point: Not applicable

Flash Point: Noncombustible solid

Flash Point Method: Not applicable

Auto ignition: Not applicable

LEL: Not applicable

UEL: Not applicable

Vapor Pressure: Negligible

Ph: Not applicable

Specific Gravity: Not applicable

Melting Point: Not available

Freezing Point: N.E.

Evaporation Rate: Not applicable

Vapor Density: Not applicable

Percent Volatile: 0

Molecular Weight: Not established

Pounds Per Gallon: 9.4

V.O.C. is 0.

**10. STABILITY AND REACTIVITY****10.1 Reactivity**

Stable

**10.2 Chemical stability**

Conditions To Avoid: Moisture

**10.3 Possibility of hazardous reactions**

No data available

**10.4 Conditions to avoid**

No data available

**10.5 Incompatible Materials**

Strong acids will liberate sulfur dioxide, carbon dioxide.

**10.6 Decomposition Products**

May produce oxides of sulfur and carbon

**11. TOXICOLOGICAL INFORMATION****11.1 Information of toxicological effects****Component information*****Hydroquinone 123-31-9*****Acute toxicity:**

Oral LD-50 (rat)

367.3 mg/kg (OECD Test Guidance 401)

Dermal LD-50 (rabbit)

>2,000 mg/kg (OECD Test Guidance 402)

Inhalation: no data

**Skin irritation: no data**

**Eye irritation: no data**

**Respiratory or Skin Sensitization** (in vivo assay – mouse (OECD Test Guidance 429)

May cause sensitization by skin contact.

May cause allergic skin reaction.

**Carcinogenicity/mutagenicity:** none

***Sodium Sulfite 7757-83-7*****Acute toxicity:**

Oral LD-50 (rat)

3,560 mg/kg

Inhalation LD-50 (rat)

>5,500 mg/m<sup>3</sup> - 4 h

Dermal: no data

**Skin irritation:**

Skin – rabbit

Result: No skin irritation

**Eye irritation:**

Skin – rabbit

Result: No skin irritation

**Respiratory or Skin Sensitization**

Prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals.

**Carcinogenicity/mutagenicity:** none

**Borax pentahydrate 12179-04-3****Acute toxicity:**

LD50 ( rats) 3,200 to 3,500 mg/kg

**Skin corrosion/irritation:**

Dermal LD50 (rabbits) 2,000 mg/kg

Borax pentahydrate is poorly absorbed through intact skin. Non-irritant.

**Serious eye damage/ irritation:**

Borax pentahydrate is a serious eye irritant.

**Respiratory or skin sensitization:**

Borax pentahydrate is not a skin sensitizer.

**Germ cell mutagenicity / carcinogenicity**

**IARC:** No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**ACGIH:** No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

**NTP:** No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

**OSHA:** No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**Reproductive toxicity :**Animal feeding studies in rat, mouse and dog, at high doses, have demonstrated effects on fertility and testes. The doses administered were many times in excess of those which humans would normally be exposed to.

**12. ECOLOGICAL INFORMATION****Component information****Hydroquinone 123-31-9****12.1 Toxicity**

Toxicity to fish LC50-Oncorhynchus mykiss (rainbow trout) – 0.4 -0.1 mg/l – 96h

Toxicity to daphnia and other aquatic invertebrates LC50 – Daphnia magna (Water flea) – 0.13 – 48h

Toxicity to algae EC50 – Pseudokirchneriella subcapitata (green algae) -0.335 mg/l – 72 h

**12.2 Persistence and degradability**

Biodegradability Biotic/Aerobic – exposure time 14d  
Result: 86% - Readily biodegradable

**12.3 Bioaccumulative potential**

Bioaccumulation

Leuciscus idus (golden orfe) – 3d – 50 µg/L  
Bioconcentration factor (BCF):40

**12.4 Mobility in soil**

No data available

**12.5 Result of PBT and vPvB assessment**

Assessment not available as chemical assessment not required/not conducted

**12.5 Other adverse effects**

Very toxic to aquatic life with long lasting effects.

***Sodium Sulfite 7757-83-7*****12.1 Toxicity**

Toxicity to fish

LC50- Gambusia affinis (Mosquito fish) -660 mg/l – 96h

**12.2 Persistence and degradability**

No data available

**12.3 Bioaccumulative potential**

No data available

**12.4 Mobility in soil**

No data available

**12.5 Result of PBT and vPvB assessment**

Assessment not available as chemical assessment not required/not conducted

**12.5 Other adverse effects**

None

***Borax pentahydrate 12179-04-3*****12.1. Toxicity Phytotoxicity**

Boron is an essential micronutrient for healthy growth of plants; however, it can be harmful to boron sensitive plants in higher quantities. Care should be taken to minimise the amount of borate product released to the environment.

**Algal toxicity**

Green algae, Pseudokirchneriella subcapitata (Hansveit and Oldersma, 2000) 72-hr  
EC50 –biomass = 40 mg B/L, or 229 mg boric acid/L.

**Invertebrate toxicity**

Daphnia, Daphnids, Daphnia magna (Gersich, 1984a) 48-hr LC50 = 133 mg B/L or  
760 mg boric acid/L or 619 mg disodium tetraborate , anhydrous/L

Fish toxicity Fish, Fathead minnow, Pimephales promelas (Soucek et al., 2010) 96-

# MATERIAL SAFETY DATA SHEET



hr LC50 = 79.7 mg B/L or 456 mg boric acid/L or 370 mg disodium tetraborate, anhydrous

## 12.2. Persistence and degradability

Boron is naturally occurring and ubiquitous in the environment. Borax is a naturally occurring borate.

## 12.3. Bio-accumulative potential

Not significantly bio-accumulative.

## 12.4. Mobility in soil

The product is soluble in water and is leachable through normal soil.

## 12.5. Results of PBT and vPvB assessment

No data available

## 12.6. Other adverse effects

No data available

## 13. DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

#### Product

Preferred options for disposal are to send to licensed reclaimers, or to permitted incinerators. Any disposal practice must be in compliance with federal, state, and local regulations. Do not dump into sewers, ground, or any body of water.

## 14. TRANSPORT INFORMATION

### DOT (US)

Not regulated

## 15. REGULATORY INFORMATION

### SARA 302 Components

The following components are subject to reporting levels established by SARA Title III, Section 302:

Hydroquinone	Cas# 123-31-9	Revision Date 2007-07-01
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### SARA 313 Components

The following components are subject to reporting levels established by SARA Title III, Section 313:

Hydroquinone	Cas# 123-31-9	Revision Date 2007-07-01
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### SARA 311/312 Hazards

Acute Health Hazard, Chronic Health Hazard

# MATERIAL SAFETY DATA SHEET



## California Prop 65 Components

This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

## TSCA

All ingredients in this finished product are listed on the EPA TSCA INVENTORY.

## SCAQMD Rule 443.1

Photochemically Reactive: No

Maximum Grams of VOC per Liter: 0 g/L

Vapor Pressure: 18 mm Hg@ 20 Degrees C

## 16. OTHER INFORMATION

**Full text of H-statements referred to under sections 2 and 3.**

Acute toxicity, Oral (Category 4), H302

Serious eye irritation (Category 2), H319

Skin sensitization (Category 1), H317

Acute aquatic toxicity (Category 1), H400

## HMIS RATING

Health: 1

Flammability: 0

Reactivity: 0

OTHER ADDITIONAL INFORMATION: The information contained herein is based on the data available to us and is believed to be accurate. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof. We assume no responsibility for the injuries from the use of the product described herein.

# ARISTA C-41 STABILIZER

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Distributor: Freestyle Photographic Supplies

5124 Sunset Blvd., Hollywood, CA 90027

Product Name: **C-41 STABILIZER**

Product Number: **101202, 101222**

**Product Use:** Photographic fixer component

**Customer Information Phone Number:**

1-800-292-6137

**CHEMTREC®: 24 Hour Emergency Transport Phone Number: 1-800-424-9300**

**CHEMTREC®: 24 Hour Emergency Transport Phone Number: 1-800-424-9300**

Date Reviewed: 04/26/2015

Version 3.0

## 2. HAZARDOUS IDENTIFICATION

### 2.1 Classification of the substance or mixture

#### Health hazard

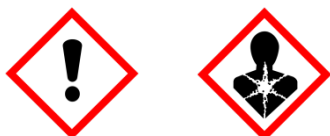
Acute toxicity, Oral (Category 4), H302

Skin sensitization (Category 1), H317

Respiratory sensitization (Category 1), H334

### 2.2 GHS Label elements, including precautionary statements

#### Pictogram



**Signal Word: DANGER**

#### Hazard statement(s)

H302 Harmful if swallowed

H317 May cause allergic skin reaction

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

#### Precautionary statement(s)

P261 Avoid breathing dust/fume/gas/mist/vapors/spray

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

P341+ P311 If experiencing respiratory symptoms: call a POISON CENTER or doctor.

P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.

P337 + P313 If eye irritation persists: Get medical advice/attention.

P501 Dispose of contents to an approved waste disposal plant.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS	OSHA PEL	ACGIH TLV	Weight %
HEXAMINE*	100-97-0	N.E.	N.E.	3-7
PHOTOFLO**	MIXTURE	N.E.	N.E.	< 2

\* Decomposes as formaldehyde and ammonia

\*\*Contains Ethylene Glycol

100 mg/m<sup>3</sup> Ceiling aerosol

## 4. FIRST AID MEASURES

### 4.1 Description of first aid measures

**Eye Contact:** Immediately flush eyes with plenty of water for at least 15 minutes. Get immediate medical attention.

**Inhalation:** If symptomatic, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

**Ingestion:** Do not induce vomiting. Only induce vomiting at the instruction of medical personnel. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

**Skin Contact:** Flush skin with plenty of water and wash with a non-alkaline skin cleaner. Wash contaminated clothes before reuse. Get medical attention if irritation develops.

**Aggravated Medical Conditions:** Individuals who are under the care of a physician or have chronic ailments, should consult a physician before using this product.

## 5. FIRE FIGHTING MEASURES

### 5.1 Extinguishing media

Nonflammable. Use agent appropriate for surrounding fire.

### 5.2 Special Hazards arising from substance or mixture

Fire or excessive heat may cause production of hazardous decomposition products.

Combustion Products: Carbon dioxide, carbon monoxide, and oxides of sulfur.

### 5.3 Advise for firefighters

Wear self-contained breathing NIOSH/MSHA approved apparatus and protective clothing to prevent contact with skin and eyes. Fire or excessive heat may produce hazardous decomposition products. Use water to keep containers cool.

## 6. ACCIDENTAL RELEASE MEASURES

### 6.1 Personal precautions, protective equipment and emergency procedures

Review fire and explosion hazards and safety precautions before proceeding with cleanup. Use appropriate personal protective equipment. Avoid contact with skin and eyes. Stop the spillage. Dike the spill. Absorb spillage in inert material. Soak up with sawdust, sand, or other absorbent material. Remove non-usable solid material and/or contaminated soil for disposal in an approved and permitted landfill.

**6.2 Environmental precautions**

Prevent liquid from entering sewers, waterways or low areas. Discharge to sewer requires approval of permitting authority and may require pre-treatment. Contaminated surfaces should be cleaned using water.

**7. HANDLING AND STORAGE****7.1 Precautions for safe handling**

Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Store in a cool, dry, well-ventilated area. Keep containers closed. Do not store or consume food, drink, or tobacco where they may become contaminated with this material.

**7.2 Conditions for safe storage, including any incompatibles**

Do not store with incompatible materials. Do not store with strong acids or oxidizing agents. All labeled precautions must be observed when handling, storing and transporting empty containers due to product residues. Triple rinse before disposal.

**8. EXPOSURE CONTROL / PERSONAL PROTECTION****8.1 Control parameters**

See Section 3.

**8.2 Exposure controls**

Use good personal hygiene when handling this product. Wash hands after use, before smoking, or using the toilet. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

**Personal protective equipment**

**Eye Protection:** Safety glasses with side shields (or goggles).

**Respiratory Protection:** Avoid breathing mists. A respirator should be worn if hazardous decomposition products are likely to be released.

**Skin protection:** Latex, rubber, or neoprene waterproof gloves are recommended.

**Body protection:** Rubber or plastic apron.

**Respiratory protection:** Local exhaust ventilation is recommended. Ventilation must be adequate to keep hazardous ingredients below their exposure limits, typically 10 air changes per hour.

**9. PHYSICAL AND CHEMICAL PROPERTIES****9.1 Information on basic physical and chemical properties**

Appearance And Odor: Clear solution; formaldehyde odor

Solubility In Water: Complete

Boiling Point: > 100 °C

Vapor Pressure: 18m Hg @ 20° C

# MATERIAL SAFETY DATA SHEET



Flash Point: Nonflammable  
Specific Gravity: 1.014  
Melting Point: Not applicable  
Freezing Point: N.E.  
Evaporation Rate: N.E.  
Vapor Density: 0.6 (Air=1)  
Percent Volatile: 92.60  
Ph: 9.27  
Molecular Weight: Not applicable  
Pounds Per Gallon: 8.45  
V.O.C. is 12.84 g/L or 1.27% or 0.11 lb./gal.

## 10. STABILITY AND REACTIVITY

### 10.1 Reactivity

Stable

### 10.2 Chemical stability

Conditions To Avoid: High temperatures

### 10.3 Possibility of hazardous reactions

None

### 10.4 Conditions to avoid

No data available

### 10.5 Incompatible Materials

Strong acids, strong oxidizing agents.

### 10.6 Decomposition Products

May produce oxides of carbon, and nitrogen.

## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information of toxicological effects

#### Component information

**Hexamethylenetetramine 100-97-0**

#### **Acute toxicity:**

LD50 Oral – rat – > 20,000 mg/kg

Dermal:

No data available

Inhalation:

No data available

#### **Skin irritation:**

No data available

**Eye irritation:**

No data available

**Respiratory or Skin Sensitization**

Maximisation Test – guinea pig – May cause allergic skin reaction

**Carcinogenicity**

None

**Germ cell mutagenicity**

Laboratory experiments have shown mutagenic effects.

**12. ECOLOGICAL INFORMATION****Component information*****Hexamethylenetetramine 100-97-0*****12.1 Toxicity**

Toxicity to fish LC50 – Pimephales promelas (fathead minnow) – 49,880 mg/l - 96 h

Toxicity to daphnia and other aquatic invertebrates EC50 - Daphnia magna (Water flea) 36,000 mg/l - 48 h

**12.2 Persistence and degradability** No data available

**12.3 Bioaccumulative potential**

No data available

**12.4 Mobility in soil**

No data available

**12.5 Results of PBT and vPvB assessment**

No data available

**12.6 Other adverse effects**

No data available

**13. DISPOSAL CONSIDERATIONS****13.1 Waste treatment methods****Product**

Preferred options for disposal are to send to licensed reclaimers, or to permitted incinerators. Any disposal practice must be in compliance with federal, state, and local regulations. Do not dump into sewers, ground, or any body of water.

**14. TRANSPORT INFORMATION****DOT (US)**

DOT Class: NOT REGULATED

Hazard Class: NONE

UN No.: NOT APPLICABLE

# MATERIAL SAFETY DATA SHEET



Packing Group:  
Guide No:  
Ship Name: PHOTOGRAPHIC STABILIZER

## 15. REGULATORY INFORMATION

### SARA 302 Components

The following components are subject to reporting: None

### SARA 313 Components

The following components are subject to reporting levels established by SARA Title III, Section 313:  
None

### SARA 311/312 Hazards

Acute Health Hazard, Chronic Health Hazard

### California Prop 65 Components

This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

### TSCA

All ingredients in this finished product are listed on the EPA TSCA INVENTORY.

### SCAQMD Rule 443.1

Photochemically Reactive: No  
Maximum Grams of VOC per Liter: 12.84 gm/L  
Vapor Pressure: N.E. mmHg@ 20 °C

## 16. OTHER INFORMATION

### Full text of H-statements referred to under sections 2 and 3.

Acute toxicity, Oral (Category 4), H302  
Skin sensitization (Category 1), H317  
Respiratory sensitization (Category 1), H334

### HMIS RATING

Health: 2  
Flammability: 0  
Reactivity: 1

OTHER ADDITIONAL INFORMATION: The information contained herein is based on the data available to us and is believed to be accurate. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof. We assume no responsibility for the injuries from the use of the product described herein.

# ARISTA® C-41 BLIX PART A

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Distributor: Freestyle Photographic Supplies

5124 Sunset Blvd., Hollywood, CA 90027

Product Name: **C-41 BLIX PART A**

Product Number: **101202, 101222**

**Product Use:** Photographic developer.

**Customer Information Phone Number:**

1-800-292-6137

**CHEMTREC®: 24 Hour Emergency Transport Phone Number: 1-800-424-9300**

**CHEMTREC®: 24 Hour Emergency Transport Phone Number: 1-800-424-9300**

Date Reviewed: 04/22/2015

Version 2.0

## 2. HAZARDOUS IDENTIFICATION

### 2.1 Classification of the substance or mixture

#### Health hazard

Causes eye irritation (Category 2B), H320

Causes skin irritation (Category 2), H314

### 2.2 GHS Label elements, including precautionary statements

#### Pictogram



**Signal Word: WARNING**

#### Hazard statement(s)

H305 May be harmful if swallowed and enters airways/

H314 Causes skin irritation

H317 May cause allergic skin reaction

H320 Causes eye irritation

H335 May cause respiratory irritation

#### Precautionary statement(s)

P261 Avoid breathing mist

P264 Wash skin thoroughly after handling

P270 Do not eat, drink, or smoke when using this product

P280 Wear protective gloves, eye protection

P301 + P312 IF SWALLOWED; call a POISON CENTER or doctor/physician if you feel unwell

P302 + P352 IF ON SKIN: Wash with plenty of soap

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P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P321 Specific treatment (see supplemental first aid instructions on this label).  
P330 Rinse mouth.  
P333 +P313 If skin irritation or rash occurs: Get medical advice/attention.  
P363 Wash contaminated clothing before reuse  
P391 Collect spillage  
P501 Dispose of contents to an approved waste disposal plant.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS	OHSA PEL	ACGIH TLV	Weight %
AMMONIUM THIOSULFATE	7783-18-8	N.E.	N.E.	50-60
SODIUM ACETATE	127-09-3	N.E.	N.E.	1-5

## 4. FIRST AID MEASURES

### 4.1 Description of first aid measures

**Eye Contact:** Immediately flush eyes with plenty of water for at least 15 minutes. Get immediate medical attention.

**Inhalation:** If symptomatic, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

**Ingestion:** If swallowed, give victim a glass of water or milk. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

**Skin Contact:** Flush skin with plenty of water and wash with a non-alkaline skin cleaner. Wash contaminated clothes before reuse. Get medical attention if irritation develops.

**Aggravated Medical Conditions:** Individuals who are under the care of a physician or have chronic ailments, should consult a physician before using this product. May cause severe allergic reaction in some asthmatics and sulfite sensitive individuals.

## 5. FIRE FIGHTING MEASURES

### 5.1 Extinguishing media

Use agent appropriate for surrounding fire.

### 5.2 Special Hazards arising from substance or mixture

Fire or excessive heat may cause production of hazardous decomposition products.  
Combustion Products: Carbon dioxide, carbon monoxide, and oxides of sulfur and nitrogen.

### 5.3 Advise for firefighters

Wear self-contained breathing NIOSH/MSHA approved apparatus and protective clothing to prevent contact with skin and eyes.

## 6. ACCIDENTAL RELEASE MEASURES

### 6.1 Personal precautions, protective equipment and emergency procedures

Review fire and explosion hazards and safety precautions before proceeding with cleanup. Use

# MATERIAL SAFETY DATA SHEET



appropriate personal protective equipment. Avoid contact with skin and eyes. Stop the spillage. Dike the spill. For small amounts less than one gallon flush to the sewer with large amounts of water. For larger spills, prevent liquid from entering sewers, waterways or low areas. Absorb spillage in inert material. Soak up with sawdust, sand, or other absorbent material. Remove non-usable solid material and/or contaminated soil for disposal in an approved and permitted landfill.

## 6.2 Environmental precautions

Prevent liquid from entering sewers, waterways or low areas. Discharge to sewer requires approval of permitting authority and may require pre-treatment. Contaminated surfaces should be cleaned using water.

## 7. HANDLING AND STORAGE

### 7.1 Precautions for safe handling

Store in a cool, dry, well-ventilated area. Keep containers closed. Do not store or consume food, drink, or tobacco where they may become contaminated with this material.

### 7.2 Conditions for safe storage, including any incompatibles

Do not store with incompatible materials. All labeled precautions must be observed when handling, storing and transporting empty containers due to product residues. Triple rinse before disposal. Dispose of in a licensed facility.

## 8. EXPOSURE CONTROL / PERSONAL PROTECTION

### 8.1 Control parameters

See Section 3.

### 8.2 Exposure controls

Use good personal hygiene when handling this product. Wash hands after use, before smoking, or using the toilet. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

#### Personal protective equipment

**Eye Protection:** Safety glasses with side shields (or goggles).

**Respiratory Protection:** When this product is used in the intended way, no respiratory protection is anticipated to be necessary.

**Skin protection:** Latex, rubber, or neoprene waterproof gloves are recommended.

**Body protection:** Rubber or plastic apron.

**Respiratory protection:** Local exhaust ventilation is recommended. Ventilation must be adequate to keep hazardous ingredients below their exposure limits.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

Appearance And Odor: Clear, colorless solution, ammonia odor.

Solubility In Water: Complete

Boiling Point: > 100°C  
Flash Point: Nonflammable  
Flash Point Method: Not applicable  
Auto ignition: Not applicable  
LEL: Not applicable  
UEL: Not applicable  
Vapor Pressure: 18 mm Hg @ 20° C  
Ph: 8.27  
Specific Gravity: 1.28 g /ml  
Melting Point: Not applicable  
Freezing Point: Not established  
Evaporation Rate: Not established  
Vapor Density: Not established  
Percent Volatile: 53.28  
Molecular Weight: Not applicable  
Pounds Per Gallon: 10.64  
V.O.C is 0.

## **10. STABILITY AND REACTIVITY**

### **10.1 Reactivity**

Stable

### **10.2 Chemical stability**

Conditions To Avoid: Heat

### **10.3 Possibility of hazardous reactions**

No data available

### **10.4 Conditions to avoid**

No data available

### **10.5 Incompatible Materials**

Strong acids and alkali

### **10.6 Decomposition Products**

Strong acids will liberate sulfur dioxide, strong bases of sodium hydroxide will liberate ammonia fumes.

## **11. TOXICOLOGICAL INFORMATION**

### **11.1 Information of toxicological effects**

#### **Component information**

#### ***Ammonium thiosulfate 7783-18-8***

#### **Acute toxicity:**

Oral: LD50 (rats): 2,890 mg/kg  
Dermal: No data  
Inhalation: No data

**Skin irritation:** Rabbit  
Non irritant  
**Eye irritation:** Rabbit  
No eye irritation (OECD Test Guideline 405).

**Carcinogenicity/mutagenicity:** none

## ***Sodium Sulfite 7757-83-7***

### **Acute toxicity:**

Oral LD-50 (rat) 3, 560 mg/kg  
Inhalation LC-50 (rabbit) >5.500 mg/kg - 4 h

Dermal: no data available

**Skin irritation:** Rabbit No skin irritation

**Eye irritation:** Rabbit Mild eye irritation

**Respiratory or Skin Sensitization** Prolonged or repeated exposure may cause allergic skin  
Reaction in certain sensitive individuals.

**Carcinogenicity/mutagenicity:** none

## **12. ECOLOGICAL INFORMATION**

### **Component information**

#### ***Ammonium thiosulfate 7783-18-8***

### **12.1 Toxicity**

Toxicity to fish LC0-Lepomis macrochirus (bluegill) - 510 mg/l – 96h  
Toxicity to daphnia and LC50 – Daphnia magna (Water flea) – 230 mg/l – 21d  
other aquatic invertebrates

Toxicity to algae EC50 – Pseudokirchneriella subcapitata - > 100 mg/l – 72 h  
(OECD Test Guideline 201).

Toxicity to bacteria Respiration inhibition EC50 – Sludge Treatment - > 1,000 mg/l –  
3h (OECD Test Guideline 201).

### **12.2 Persistence and degradability**

No data available

### **12.3 Bioaccumulative potential**

No data available

### **12.4 Mobility in soil**

No data available

### **12.5 Result of PBT and vPvB assessment**

Assessment not available as chemical assessment not required/not conducted

# MATERIAL SAFETY DATA SHEET



## **Sodium Sulfite 7757-83-7**

### **12.1 Toxicity**

Toxicity to fish LC- Gambusia affinis (Mosquito fish) – 660 mg/l – 96h

### **12.2 Persistence and degradability**

No data available

### **12.3 Bioaccumulative potential**

No data available

### **12.4 Mobility in soil**

No data available

## **13. DISPOSAL CONSIDERATIONS**

### **13.1 Waste treatment methods**

#### **Product**

Preferred options for disposal are to send to licensed reclaimers, or to permitted incinerators. Any disposal practice must be in compliance with federal, state, and local regulations. Do not dump into sewers, ground, or any body of water.

## **14. TRANSPORT INFORMATION**

### **DOT (US)**

Not regulated

## **15. REGULATORY INFORMATION**

### **SARA 302 Components**

The following components are subject to reporting levels established by SARA Title III, Section 302:  
None

### **SARA 313 Components**

The following components are subject to reporting levels established by SARA Title III, Section 313:  
None

### **SARA 311/312 Hazards**

Acute Health Hazard, Chronic Health Hazard

### **California Prop 65 Components**

This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

### **TSCA**

All ingredients in this finished product are listed on the EPA TSCA INVENTORY.

**SCAQMD Rule 443.1**

Photochemically Reactive: No  
Maximum Grams of VOC per Liter: 0  
Vapor Pressure: 18 mm Hg@ 20 Degrees C

**16. OTHER INFORMATION****Full text of H-statements referred to under sections 2 and 3.**

H305	May be harmful if swallowed and enters airways (Category 2)
H314	Causes skin irritation (Category 2)
H317	May cause allergic skin reaction (Category 1)
H320	Causes eye irritation (Category 2B)
H335	May cause respiratory irritation (Category 3)

**HMIS RATING**

Health: 1  
Flammability: 0  
Reactivity: 0  
Protective: C

OTHER ADDITIONAL INFORMATION: The information contained herein is based on the data available to us and is believed to be accurate. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof. We assume no responsibility for the injuries from the use of the product described herein.

# ARISTA® C-41 BLIX PART B

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Distributor: Freestyle Photographic Supplies

5124 Sunset Blvd., Hollywood, CA 90027

Product Name: **C-41 BLIX PART B**

Product Number: **101202, 101222**

**Product Use:** Photographic fixer component

**Customer Information Phone Number:**

1-800-292-6137

**CHEMTREC®: 24 Hour Emergency Transport Phone Number: 1-800-424-9300**

**CHEMTREC®: 24 Hour Emergency Transport Phone Number: 1-800-424-9300**

Date Reviewed: 04/22/2015

Version 2.0

## 2. HAZARDOUS IDENTIFICATION

### 2.1 Classification of the substance or mixture

#### Health hazard

Causes severe skin burns and eye damage (Skin Corr. 1B) H314

Skin sensitization (Category 2), H318

### 2.2 GHS Label elements, including precautionary statements

#### Pictogram



**Signal Word: DANGER**

#### Hazard statement(s)

H314 Causes severe skin burns and eye damage

#### Precautionary statement(s)

P264 Wash skin thoroughly after handling

P270 Do not eat, drink, or smoke when using this product

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

P301 + P312 IF SWALLOWED; call a POISON CENTER or doctor/physician Do NOT induce vomiting

P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.

P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

# MATERIAL SAFETY DATA SHEET



P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.  
P337 + P313 If eye irritation persists: Get medical advice/attention.  
P363 Wash contaminated clothing before reuse  
P391 Collect spillage

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS	OSHA PEL	ACGIH TLV	Weight %
ACETIC ACID	64-19-7	25 mg/m <sup>3</sup>	25 mg/m <sup>3</sup> TWA 37 mg/m <sup>3</sup> STEL	20-25

## 4. FIRST AID MEASURES

### 4.1 Description of first aid measures

**Eye Contact:** Immediately flush eyes with plenty of water for at least 15 minutes. Get immediate medical attention.

**Inhalation:** If symptomatic, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

**Ingestion:** Do not induce vomiting. Only induce vomiting at the instruction of medical personnel. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

**Skin Contact:** Flush skin with plenty of water and wash with a non-alkaline skin cleaner. Wash contaminated clothes before reuse. Get medical attention if irritation develops.

**Aggravated Medical Conditions:** Individuals who are under the care of a physician or have chronic ailments, should consult a physician before using this product.

## 5. FIRE FIGHTING MEASURES

### 5.1 Extinguishing media

Nonflammable. Use agent appropriate for surrounding fire.

### 5.2 Special Hazards arising from substance or mixture

Fire or excessive heat may cause production of hazardous decomposition products.

Combustion Products: Carbon dioxide, carbon monoxide.

### 5.3 Advise for firefighters

Wear self-contained breathing NIOSH/MSHA approved apparatus and protective clothing to prevent contact with skin and eyes. Fire or excessive heat may produce hazardous decomposition products. Use water to keep containers cool.

## 6. ACCIDENTAL RELEASE MEASURES

### 6.1 Personal precautions, protective equipment and emergency procedures

Review fire and explosion hazards and safety precautions before proceeding with cleanup. Use appropriate personal protective equipment. Avoid contact with skin and eyes. Stop the spillage. Dike the spill. Absorb spillage in inert material. Soak up with sawdust, sand, or other absorbent

# MATERIAL SAFETY DATA SHEET



material. Remove non-usable solid material and/or contaminated soil for disposal in an approved and permitted landfill.

## 6.2 Environmental precautions

Prevent liquid from entering sewers, waterways or low areas. Discharge to sewer requires approval of permitting authority and may require pre-treatment. Contaminated surfaces should be cleaned using water.

## 7. HANDLING AND STORAGE

### 7.1 Precautions for safe handling

Store in a cool, dry, well-ventilated area. Keep containers closed. Do not store or consume food, drink, or tobacco where they may become contaminated with this material.

### 7.2 Conditions for safe storage, including any incompatibles

Do not store with incompatible materials. Do not store with strong acids. All labeled precautions must be observed when handling, storing and transporting empty containers due to product residues. Triple rinse before disposal. Dispose of in a licensed facility.

## 8. EXPOSURE CONTROL / PERSONAL PROTECTION

### 8.1 Control parameters

See Section 3.

### 8.2 Exposure controls

Use good personal hygiene when handling this product. Wash hands after use, before smoking, or using the toilet. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

#### Personal protective equipment

**Eye Protection:** Safety glasses with side shields (or goggles).

**Respiratory Protection:** If use conditions generate decomposition vapors or fumes; use a NIOSH approved respirator with acid gas cartridges.

**Skin protection:** Latex, rubber, or neoprene waterproof gloves are recommended.

**Body protection:** Rubber or plastic apron.

**Respiratory protection:** Local exhaust ventilation is recommended. Ventilation must be adequate to keep hazardous ingredients below their exposure limits, typically 10 air changes per hour.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

Appearance And Odor: Clear, colorless liquid with a strong vinegar odor.

Solubility In Water: Complete

Boiling Point: > 100° C

Flash Point: Nonflammable

# MATERIAL SAFETY DATA SHEET



Flash Point Method: Not applicable  
Auto ignition: Not applicable  
LEL: Not applicable  
UEL: Not applicable  
Vapor Pressure: Not established  
Ph: 1.82  
Specific Gravity: 1.032 g/ml  
Melting Point: Not applicable  
Freezing Point: Not established  
Evaporation Rate: Not established  
Vapor Density: Not established  
Percent Volatile: 100.0  
Molecular Weight: Not applicable  
Pounds Per Gallon: 8.6  
V.O.C. is 246.94 g/L or 23.93%, or 2.06 lb. /gal.

## 10. STABILITY AND REACTIVITY

### 10.1 Reactivity

Stable

### 10.2 Chemical stability

Conditions To Avoid: High temperatures

### 10.3 Possibility of hazardous reactions

None

### 10.4 Conditions to avoid

No data available

### 10.5 Incompatible Materials

Strong oxidizers and reducing agents.

### 10.6 Decomposition Products

May produce oxides of carbon.

## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information of toxicological effects

#### Component information

#### **Acetic Acid 64-19-7**

#### **Acute toxicity:**

Oral: LD50 (rats): 3,310 mg/kg  
Dermal: LD50 (Rabbit) – 4h – 11.4 mg/l  
Inhalation: LC50 (Mouse) – 1h – 5620 ppm  
LC50 (Rat) – 4h -11.4 mg/l

**Skin irritation:** No data available

**Eye irritation:** Rabbit  
Corrosive to eyes

**Respiratory or skin sensitization** No data available

**Carcinogenicity/mutagenicity:** none

**Reproductive toxicity:** No data available

**Specific target organ toxicity – repeated exposure –** No data available

**Aspiration hazard -** No data available

**OSHA:** No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**Reproductive toxicity**

No data available No data available

**Specific target organ toxicity - single exposure**

No data available Specific target organ toxicity - repeated exposure No data available

**Aspiration hazard**

No data available

## 12. ECOLOGICAL INFORMATION

### Component information

**Acetic Acid 64-19-7**

### 12.1 Toxicity

Toxicity to fish	LC0- Oncorhynchus mykiss (rainbow trout) - > 1,000 mg/l – 96h (OECD Test Guideline 203).
Toxicity to daphnia and other aquatic invertebrates	LC50 – Daphnia magna (Water flea) – > 300.82mg/l – 48h (OECD Test Guideline 202).

### 12.2 Persistence and degradability

No data available

### 12.3 Bioaccumulative potential

Biodegradability	aerobic – exposure time 30d Result: 99% - Readily biodegradable
Biochemical Oxygen Demand (BOD)	880 mg/g

### 12.4 Mobility in soil

No data available

### 12.5 Result of PBT and vPvB assessment

Assessment not available as chemical assessment not required/not conducted

### 12.5 Result of PBT and vPvB assessment

Assessment not available as chemical assessment not required/not conducted

### 12.5 Other adverse effects

No data available.

## 13. DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

#### Product

Preferred options for disposal are to send to licensed reclaimers, or to permitted incinerators. Any disposal practice must be in compliance with federal, state, and local regulations. Do not dump into sewers, ground, or any body of water.

## 14. TRANSPORT INFORMATION

### DOT (US)

DOT Class: Acetic Acid solution, *with more than 10 percent and less than 50 percent acid, by mass.*

Hazard Class: 8

UN No.: 2790

Packing Group: III

Guide No: 154

Ship Name: Acetic Acid solution, *with more than 10 percent and less than 50 percent acid, by mass.*

Limited Quantity Exception may apply to this product, for "inner packagings not over 1.0L (0.3 gal) for liquids and 1.0 kg (2.2 lb) for solids". 173.154 (b) (1). Each package must conform to the packaging requirements of Subpart B of Part 173 and may not exceed 30 kg (66 lb) gross weight. For further information consult the 49 CFR.

DOT Class: CONSUMER COMMODITY, ORM-D

Hazard Class: NOT APPLICABLE

UN No.: NOT APPLICABLE

Packing Group: NOT APPLICABLE

Guide No: NOT APPLICABLE

Ship Name: NOT APPLICABLE

## 15. REGULATORY INFORMATION

### SARA 302 Components

The following components are subject to reporting: None

### SARA 313 Components

The following components are subject to reporting levels established by SARA Title III, Section 313: None

### SARA 311/312 Hazards

Acute Health Hazard, Chronic Health Hazard

### California Prop 65 Components

This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

### TSCA

# MATERIAL SAFETY DATA SHEET



All ingredients in this finished product are listed on the EPA TSCA INVENTORY.  
TSCA: All ingredients in this finished product are listed on the EPA TSCA INVENTORY.

## SCAQMD Rule 443.1

Photochemically Reactive: No  
Maximum Grams of VOC per Liter: 246.94 gm/L  
Vapor Pressure: N.E. mmHg@ 20 °C

## 16. OTHER INFORMATION (HMIS)

**Full text of H-statements referred to under sections 2 and 3.**

Causes severe skin burns and eye damage (Skin Corr. 1B) H314  
Skin sensitization (Category 2), H318

### HMIS RATING

Health: 3  
Flammability: 0  
Reactivity: 0

OTHER ADDITIONAL INFORMATION: The information contained herein is based on the data available to us and is believed to be accurate. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof. We assume no responsibility for the injuries from the use of the product described herein.

# ARISTA® C-41 BLIX PART C

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Distributor: Freestyle Photographic Supplies

5124 Sunset Blvd., Hollywood, CA 90027

Product Name: **C-41 BLIX PART C**

Product Number: **101202, 101222**

**Product Use:** Photographic fixer component

**Customer Information Phone Number:**

1-800-292-6137

**CHEMTREC®: 24 Hour Emergency Transport Phone Number: 1-800-424-9300**

**CHEMTREC®: 24 Hour Emergency Transport Phone Number: 1-800-424-9300**

Date Reviewed: 04/26/2015

Version 2.0

## 2. HAZARDOUS IDENTIFICATION

### 2.1 Classification of the substance or mixture

#### Health hazard

May cause slight eye irritation H320

May cause skin irritation H314

### 2.2 GHS Label elements, including precautionary statements

#### Pictogram



**Signal Word: WARNING**

#### Hazard statement(s)

H314 May cause skin irritation

H320 May cause slight eye irritation

#### Precautionary statement(s)

P264 Wash skin thoroughly after handling

P270 Do not eat, drink, or smoke when using this product

P280 Wear protective gloves, eye protection

P302 + P352 IF ON SKIN: Wash with plenty of soap

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS	OHSA PEL	ACGIH TLV	Weight %
FERRIC AMMONIUM EDTA	21265-50-9	50 ppm	25 ppm	90-100

## 4. FIRST AID MEASURES

### 4.1 Description of first aid measures

**Eye Contact:** Immediately flush eyes with plenty of water for at least 15 minutes. Get immediate medical attention.

**Inhalation:** If symptomatic, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

**Ingestion:** If swallowed, give victim a glass of water or milk. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

**Skin Contact:** Flush skin with plenty of water and wash with a non-alkaline skin cleaner. Wash contaminated clothes before reuse. Get medical attention if irritation develops.

## 5. FIRE FIGHTING MEASURES

### 5.1 Extinguishing media

Use agent appropriate for surrounding fire.

### 5.2 Special Hazards arising from substance or mixture

Not considered a fire hazard. When involved in a fire, does not contribute any unusual hazards.

Fire or excessive heat may cause production of hazardous decomposition products.

Combustion Products: Carbon dioxide, carbon monoxide.

### 5.3 Advise for firefighters

Wear self-contained breathing NIOSH/MSHA approved apparatus and protective clothing to prevent contact with skin and eyes.

## 6. ACCIDENTAL RELEASE MEASURES

### 6.1 Personal precautions, protective equipment and emergency procedures

Review fire and explosion hazards and safety precautions before proceeding with cleanup. Use appropriate personal protective equipment. Avoid contact with skin and eyes. Stop the spillage. Dike the spill. Absorb spillage in inert material. Soak up with sawdust, sand, or other absorbent material. Remove non-usable solid material and/or contaminated soil for disposal in an approved and permitted landfill.

### 6.2 Environmental precautions

Prevent liquid from entering sewers, waterways or low areas. Discharge to sewer requires approval of permitting authority and may require pre-treatment. Contaminated surfaces should be cleaned using water.

## 7. HANDLING AND STORAGE

### 7.1 Precautions for safe handling

Store in a cool, dry, well-ventilated area. Keep containers closed. Do not store or consume food, drink, or tobacco where they may become contaminated with this material.

### 7.2 Conditions for safe storage, including any incompatibles

Do not store with incompatible materials. All labeled precautions must be observed when handling, storing and transporting empty containers due to product residues. Triple rinse before disposal. Dispose of in a licensed facility.

## 8. EXPOSURE CONTROL / PERSONAL PROTECTION

### 8.1 Control parameters

See Section 3.

### 8.2 Exposure controls

Use good personal hygiene when handling this product. Wash hands after use, before smoking, or using the toilet. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

#### Personal protective equipment

**Eye Protection:** Safety glasses with side shields (or goggles).

**Respiratory Protection:** When this product is used in the intended way, no respiratory protection is anticipated to be necessary.

**Skin protection:** Latex, rubber, or neoprene waterproof gloves are recommended.

**Body protection:** Rubber or plastic apron.

**Respiratory protection:** Local exhaust ventilation is recommended. Ventilation must be adequate to keep hazardous ingredients below their exposure limits.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

Appearance And Odor: Reddish brown solution; ammonia odor

Solubility In Water: Complete

Boiling Point: > 100 °C

Flash Point: Nonflammable

Flash Point Method: Not applicable

Auto ignition: Not applicable

LEL: Not applicable

UEL: Not applicable

Specific Gravity: 1.32

Vapor Pressure: 18m Hg @ 20°C

Melting Point: Not applicable

Freezing Point: N.E.

Evaporation Rate: N.E.  
Vapor Density: N.E.  
Evaporation Rate: Not established  
Vapor Density: Not established  
Percent Volatile: 53.01  
Ph: 7.40  
Pounds Per Gallon: 10.99  
Molecular Weight: Not applicable  
V.O.C. is 0.

## **10. STABILITY AND REACTIVITY**

### **10.1 Reactivity**

Stable

### **10.2 Chemical stability**

Conditions To Avoid: Metals such as aluminum, copper, copper alloys, nickel, and zinc.  
Aqueous solution in contact with aluminum evolves hydrogen.

### **10.3 Possibility of hazardous reactions**

No data available

### **10.4 Conditions to avoid**

No data available

### **10.5 Incompatible Materials**

Strong oxidizers, alkalis, acids.

### **10.6 Decomposition Products**

May produce oxides of nitrogen, carbon dioxide, carbon monoxide, and ammonia.

## **11. TOXICOLOGICAL INFORMATION**

### **11.1 Information of toxicological effects**

#### **Component information**

#### ***Ferric Diammonium EDTA 68413-60-5***

#### **Acute toxicity:**

Oral: LD50 (rats): is expected to be greater than 5,000 mg/kg based on similar products.  
Dermal: No data  
Inhalation: No data

**Skin irritation:** Rabbit  
Non irritant

**Eye irritation:** Rabbit  
No eye irritation (OECD Test Guideline 405).

**Carcinogenicity/mutagenicity:** none

## 12. ECOLOGICAL INFORMATION

### Component information

#### ***Ferric Diammonium EDTA 68413-60-5***

##### **12.1 Toxicity**

No experimental ecological data are available for the mixture as such. From structurally related products, the following may be expected.

Toxicity to fish	LC0-Oncorhynchus mykiss - > 100 mg/l – 96h
Toxicity to daphnia	EC50 – Daphnia magna (Water flea) → 100 mg/l – 48h
Toxicity to algae	EC50 – Pseudokirchneriella subcapitata - > 100 mg/l – 72 h (OECD Test Guideline 201).

##### **12.2 Biodegradation**

This product is not readily biodegradable.

##### **12.3 Bioaccumulative potential**

Bioaccumulation in fish and other aquatic species is not expected due to the high water solubility.

##### **12.4 Chemical fate**

This product is not expected to undergo hydrolysis. The substance is not expected to enter the atmosphere significantly due to its high water solubility.

##### **12.5 Result of PBT and vPvB assessment**

Assessment not available as chemical assessment not required/not conducted

## 13. DISPOSAL CONSIDERATIONS

### **13.1 Waste treatment methods**

#### **Product**

Preferred options for disposal are to send to licensed reclaimers, or to permitted incinerators. Any disposal practice must be in compliance with federal, state, and local regulations.

## 14. TRANSPORT INFORMATION

### **DOT (US)**

Not regulated

## 15. REGULATORY INFORMATION

### **SARA 302 Components**

The following components are subject to reporting levels established by SARA Title III, Section 302:  
None

# MATERIAL SAFETY DATA SHEET



## SARA 313 Components

The following components are subject to reporting levels established by SARA Title III, Section 313:  
None

## SARA 311/312 Hazards

None

## California Prop 65 Components

This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

## TSCA

All ingredients in this finished product are listed on the EPA TSCA INVENTORY.

## SCAQMD Rule 443.1

Photochemically Reactive: No  
Maximum Grams of VOC per Liter: 0  
Vapor Pressure: 18 mm Hg@ 20 Degrees C

## 16. OTHER INFORMATION

Full text of H-statements referred to under sections 2 and 3.

H314	May cause skin irritation
H320	May cause slight eye irritation

## HMIS RATING

Health: 1  
Flammability: 0  
Reactivity: 0  
Protective: C

OTHER ADDITIONAL INFORMATION: The information contained herein is based on the data available to us and is believed to be accurate. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof. We assume no responsibility for the injuries from the use of the product described herein.

# ARISTA® C-41 DEVELOPER PART A

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Distributor: Freestyle Photographic Supplies

5124 Sunset Blvd., Hollywood, CA 90027

Product Name: **C-41 DEVELOPER PART A**

Product Number: **101202, 101222**

**Product Use:** Photographic developer.

**Customer Information Phone Number:**

1-800-292-6137

**CHEMTREC®: 24 Hour Emergency Transport Phone Number: 1-800-424-9300**

**CHEMTREC®: 24 Hour Emergency Transport Phone Number: 1-800-424-9300**

Date Reviewed: 04/04/2015

Version 3.0

## 2. HAZARDOUS IDENTIFICATION

### 2.1 Classification of the substance or mixture

#### Health hazard

Acute toxicity, Oral (Category 4), H302

Skin irritation (Category 2), H315

Eye irritation (Category 2A), H319

Specific organ toxicity Oral (Category 3), Respiratory H335

### 2.2 GHS Label elements, including precautionary statements

#### Pictogram



**Signal Word: WARNING**

#### Hazard statement(s)

H302	Harmful if swallowed
H315	Causes skin irritation
H319	Causes serious eye irritation
H335	May cause respiratory irritation

#### Precautionary statement(s)

P261	Avoid breathing mist
P264	Wash skin thoroughly after handling
P270	Do not eat, drink, or smoke when using this product
P273	Avoid release into the environment

# MATERIAL SAFETY DATA SHEET



P280 Wear protective gloves, eye protection  
P301 + P312 IF SWALLOWED; call a POISON CENTER or doctor/physician if you feel unwell  
P302 + P352 IF ON SKIN: Wash with plenty of soap  
P304 + P340 IF INHALED: remove victim to fresh air and keep at rest in a position comfortable for breathing.  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P330 Rinse mouth.  
P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.  
P337 + P313 If eye irritation persists: Get medical advice/attention.  
P363 Wash contaminated clothing before reuse  
P391 Collect spillage  
P501 Dispose of contents to an approved waste disposal plant.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS	OHSA PEL	ACGIH TLV	Weight %
POTASSIUM CARBONATE	584-08-7	N.E.	N.E.	10-15
TRISODIUM HEDTA	139-89-9	N.E.	N.E.	1-5
GLACIAL ACETIC ACID	64-19-7	10 ppm TWA	10 ppm TWA	1-3
SODIUM SULFITE	7757-83-7	N.E.	N.E.	<1

## 4. FIRST AID MEASURES

### 4.1 Description of first aid measures

**Eye Contact:** Immediately flush eyes with plenty of water for at least 15 minutes. Get immediate medical attention.

**Inhalation:** If symptomatic, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

**Ingestion:** Do not induce vomiting. Only induce vomiting at the instruction of medical personnel. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

**Skin Contact:** Flush skin with plenty of water and wash with a non-alkaline skin cleaner. Wash contaminated clothes before reuse. Get medical attention if irritation develops.

**Aggravated Medical Conditions:** Individuals who are under the care of a physician or have chronic ailments, should consult a physician before using this product.

## 5. FIRE FIGHTING MEASURES

### 5.1 Extinguishing media

Nonflammable. Use agent appropriate for surrounding fire.

### 5.2 Special Hazards arising from substance or mixture

Fire or excessive heat may cause production of hazardous decomposition products.

Combustion Products: Carbon dioxide, carbon monoxide, and sulfur.

**5.3 Advise for firefighters**

Wear self-contained breathing NIOSH/MSHA approved apparatus and protective clothing to prevent contact with skin and eyes. Fire or excessive heat may produce hazardous decomposition products. Use water to keep containers cool.

**6. ACCIDENTAL RELEASE MEASURES****6.1 Personal precautions, protective equipment and emergency procedures**

Review fire and explosion hazards and safety precautions before proceeding with cleanup. Use appropriate personal protective equipment. Avoid contact with skin and eyes. Stop the spillage. Dike the spill. Absorb spillage in inert material. Soak up with sawdust, sand, or other absorbent material. Remove non-usable solid material and/or contaminated soil for disposal in an approved and permitted landfill.

**6.2 Environmental precautions**

Prevent liquid from entering sewers, waterways or low areas. Discharge to sewer requires approval of permitting authority and may require pre-treatment. Contaminated surfaces should be cleaned using water.

**7. HANDLING AND STORAGE****7.1 Precautions for safe handling**

Store in a cool, dry, well-ventilated area. Keep containers closed. Do not store or consume food, drink, or tobacco where they may become contaminated with this material.

**7.2 Conditions for safe storage, including any incompatibles**

Do not store with incompatible materials. Do not store with strong acids. All labeled precautions must be observed when handling, storing and transporting empty containers due to product residues. Triple rinse before disposal. Dispose of in a licensed facility.

**8. EXPOSURE CONTROL / PERSONAL PROTECTION****8.1 Control parameters**

See Section 3.

**8.2 Exposure controls**

Use good personal hygiene when handling this product. Wash hands after use, before smoking, or using the toilet. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

**Personal protective equipment**

**Eye Protection:** Safety glasses with side shields (or goggles).

**Respiratory Protection:** When this product is used in the intended way, no respiratory protection is anticipated to be necessary. However, if use conditions generate decomposition vapors or fumes; use a NIOSH approved respirator with acid gas cartridges.

**Skin protection:** Latex, rubber, or neoprene waterproof gloves are recommended.

**Body protection:** Rubber or plastic apron.

**Respiratory protection:** Local exhaust ventilation is recommended. Ventilation must be adequate to keep hazardous ingredients below their exposure limits.

## **9. PHYSICAL AND CHEMICAL PROPERTIES**

### **9.1 Information on basic physical and chemical properties**

Appearance And Odor: Colorless liquid with no odor.

Solubility In Water: Complete

Boiling Point: > 100° C

Flash Point: Nonflammable

Flash Point Method: Not applicable

Auto ignition: Not applicable

LEL: Not applicable

UEL: Not applicable

Vapor Pressure: Not established

Ph: 10.52

Specific Gravity: 1.14 g /ml

Melting Point: Not applicable

Freezing Point: N.E.

Evaporation Rate: > 1

Vapor Density: Not established

Percent Volatile: 80.06

Molecular Weight: Not applicable

Pounds Per Gallon: 9.46

V.O.C. is 19.63 g/L or 1.73% or 0.16 lb./gal.

## **10. STABILITY AND REACTIVITY**

### **10.1 Reactivity**

Stable

### **10.2 Chemical stability**

Conditions To Avoid: None

### **10.3 Possibility of hazardous reactions**

No data available

### **10.4 Conditions to avoid**

High temperatures

### **10.5 Incompatible Materials**

Strong acids

### **10.6 Decomposition Products**

May produce oxides of sulfur and carbon

**11. TOXICOLOGICAL INFORMATION****11.1 Information of toxicological effects****Component information*****Potassium Carbonate 584-08-7*****Acute toxicity:**

LD50 Oral – rate – 1970 mg/kg

Dermal:

No data available

Inhalation:

No data available

**Skin irritation:**

No data available

**Eye irritation:**

No data available

**Respiratory or Skin Sensitization**

No data available

**Carcinogenicity/mutagenicity:** none***Sodium Sulfite 7757-83-7*****Acute toxicity:**

Oral LD-50 (rat)

3,560 mg/kg

Inhalation LD-50 (rat)

>5,500 mg/m<sup>3</sup> - 4 h

Dermal: no data

**Skin irritation:**

Skin – rabbit

Result: No skin irritation

**Eye irritation:**

Skin – rabbit

Result: No skin irritation

**Respiratory or Skin Sensitization**

Prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals.

**Carcinogenicity/mutagenicity:** none**12. ECOLOGICAL INFORMATION****Component information*****Potassium Carbonate 584-08-7*****12.1 Toxicity**

Toxicity to fish

LC50- Pimephales promelas (fathead minnow) -510 mg/l – 96h

**12.2 Persistence and degradability**

No data available

**12.3 Bioaccumulative potential**

No data available

**12.4 Mobility in soil**

No data available

**12.5 Result of PBT and vPvB assessment**

Assessment not available as chemical assessment not required/not conducted

**12.5 Other adverse effects**

None

***Sodium Sulfite 7757-83-7*****12.1 Toxicity**

Toxicity to fish

LC50- *Gambusia affinis* (Mosquito fish) -660 mg/l – 96h

**12.2 Persistence and degradability**

No data available

**12.3 Bioaccumulative potential**

No data available

**12.4 Mobility in soil**

No data available

**12.5 Result of PBT and vPvB assessment**

Assessment not available as chemical assessment not required/not conducted

**12.5 Other adverse effects**

None

**13. DISPOSAL CONSIDERATIONS****13.1 Waste treatment methods****Product**

Preferred options for disposal are to send to licensed reclaimers, or to permitted incinerators. Any disposal practice must be in compliance with federal, state, and local regulations. Do not dump into sewers, ground, or any body of water.

**14. TRANSPORT INFORMATION****DOT (US)**

Not regulated

**15. REGULATORY INFORMATION****SARA 302 Components**

The following components are subject to reporting: None

**SARA 313 Components**

The following components are subject to reporting levels established by SARA Title III, Section 313: None

**SARA 311/312 Hazards**

Acute Health Hazard, Chronic Health Hazard

**California Prop 65 Components**

This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

**TSCA**

All ingredients in this finished product are listed on the EPA TSCA INVENTORY.

**SCAQMD Rule 443.1**

Photochemically Reactive: No

Maximum Grams of VOC per Liter: 19.63 gm/L g/L

Vapor Pressure: N.E. mm Hg@ 20 Degrees C

**16. OTHER INFORMATION****Full text of H-statements referred to under sections 2 and 3.**

Acute toxicity, Oral (Category 4), H302

Skin irritation (Category 2), H315

Eye irritation (Category 2A), H319

Specific organ toxicity Oral (Category 3), Respiratory H335

**HMIS RATING**

Health: 2

Flammability: 0

Reactivity: 0

OTHER ADDITIONAL INFORMATION: The information contained herein is based on the data available to us and is believed to be accurate. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof. We assume no responsibility for the injuries from the use of the product described herein.

# ARISTA® C-41 DEVELOPER PART B

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Distributor: Freestyle Photographic Supplies

5124 Sunset Blvd., Hollywood, CA 90027

Product Name: **C-41 DEVELOPER PART B**

Product Number: **101202, 101222**

**Product Use:** Photographic developer.

**Customer Information Phone Number:**

1-800-292-6137

**CHEMTREC®: 24 Hour Emergency Transport Phone Number: 1-800-424-9300**

**CHEMTREC®: 24 Hour Emergency Transport Phone Number: 1-800-424-9300**

Date Reviewed: 04/04/2015

Version 2.0

## 2. HAZARDOUS IDENTIFICATION

### 2.1 Classification of the substance or mixture

#### Health hazard

Corrosive to metals (Category 1), H290

Acute toxicity, Oral (Category 4), H302

Skin irritation (Category 2), H315

Eye irritation (Category 2A), H319

Skin sensitization (Category 1), H317

Specific organ toxicity Oral (Category 2), H373

### 2.2 GHS Label elements, including precautionary statements

#### Pictogram



**Signal Word: WARNING**

#### Hazard statement(s)

H290	May be corrosive to metals
H302 H312	Harmful if swallowed or in contact with skin
H315	Causes skin irritation
H319	Causes serious eye irritation
H335	May cause respiratory irritation

#### Precautionary statement(s)

P261	Avoid breathing mist
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# MATERIAL SAFETY DATA SHEET



P264 Wash skin thoroughly after handling  
P270 Do not eat, drink, or smoke when using this product  
P273 Avoid release into the environment  
P280 Wear protective gloves, eye protection  
P301 + P312 IF SWALLOWED; call a POISON CENTER or doctor/physician if you feel unwell  
P302 + P352 IF ON SKIN: Wash with plenty of soap  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P330 Rinse mouth.  
P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.  
P337 + P313 If eye irritation persists: Get medical advice/attention.  
P363 Wash contaminated clothing before reuse  
P391 Collect spillage  
P501 Dispose of contents to an approved waste disposal plant.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS	OHSA PEL	ACGIH TLV	Weight %
Hydroxylamine sulfate	10039-54-0	N.E.	N.E.	1-3

## 4. FIRST AID MEASURES

### 4.1 Description of first aid measures

**Eye Contact:** Immediately flush eyes with plenty of water for at least 15 minutes. Get immediate medical attention.

**Inhalation:** If symptomatic, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

**Ingestion:** Do not induce vomiting. Only induce vomiting at the instruction of medical personnel. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

**Skin Contact:** Flush skin with plenty of water and wash with a non-alkaline skin cleaner. Wash contaminated clothes before reuse. Get medical attention if irritation develops.

**Aggravated Medical Conditions:** Individuals who are under the care of a physician or have chronic ailments, should consult a physician before using this product.

## 5. FIRE FIGHTING MEASURES

### 5.1 Extinguishing media

Nonflammable. Use agent appropriate for surrounding fire.

### 5.2 Special Hazards arising from substance or mixture

Fire or excessive heat may cause production of hazardous decomposition products.

Combustion Products: Carbon dioxide, carbon monoxide, and sulfur.

### 5.3 Advise for firefighters

Wear self-contained breathing NIOSH/MSHA approved apparatus and protective clothing to prevent contact with skin and eyes. Fire or excessive heat may produce hazardous decomposition

products. Use water to keep containers cool.

## **6. ACCIDENTAL RELEASE MEASURES**

### **6.1 Personal precautions, protective equipment and emergency procedures**

Review fire and explosion hazards and safety precautions before proceeding with cleanup. Use appropriate personal protective equipment. Avoid contact with skin and eyes. Stop the spillage. Dike the spill. Absorb spillage in inert material. Soak up with sawdust, sand, or other absorbent material. Remove non-usable solid material and/or contaminated soil for disposal in an approved and permitted landfill.

### **6.2 Environmental precautions**

Prevent liquid from entering sewers, waterways or low areas. Discharge to sewer requires approval of permitting authority and may require pre-treatment. Contaminated surfaces should be cleaned using water.

## **7. HANDLING AND STORAGE**

### **7.1 Precautions for safe handling**

Store in a cool, dry, well-ventilated area. Keep containers closed. Do not store or consume food, drink, or tobacco where they may become contaminated with this material.

### **7.2 Conditions for safe storage, including any incompatibles**

Do not store with incompatible materials. Do not store with strong acids. All labeled precautions must be observed when handling, storing and transporting empty containers due to product residues. Triple rinse before disposal. Dispose of in a licensed facility.

## **8. EXPOSURE CONTROL / PERSONAL PROTECTION**

### **8.1 Control parameters**

See Section 3.

### **8.2 Exposure controls**

Use good personal hygiene when handling this product. Wash hands after use, before smoking, or using the toilet. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

#### **Personal protective equipment**

**Eye Protection:** Safety glasses with side shields (or goggles).

**Respiratory Protection:** When this product is used in the intended way, no respiratory protection is anticipated to be necessary. However, if use conditions generate decomposition vapors or fumes; use a NIOSH approved respirator with acid gas cartridges.

**Skin protection:** Latex, rubber, or neoprene waterproof gloves are recommended.

**Body protection:** Rubber or plastic apron.

**Respiratory protection:** Local exhaust ventilation is recommended. Ventilation must be adequate to keep hazardous ingredients below their exposure limits.

**9. PHYSICAL AND CHEMICAL PROPERTIES****9.1 Information on basic physical and chemical properties**

Appearance And Odor: Colorless liquid with no odor.

Solubility In Water: Complete

Boiling Point: > 100° C

Flash Point: Nonflammable

Flash Point Method: Not applicable

Auto ignition: Not applicable

LEL: Not applicable

UEL: Not applicable

Vapor Pressure: Not established

Ph: 3.71

Specific Gravity: 1.018 g /ml

Melting Point: Not applicable

Freezing Point: N.E.

Evaporation Rate: > 1

Vapor Density: 0.6 (air=1)

Percent Volatile: 97.0

Molecular Weight: Not applicable

Pounds Per Gallon: 8.48

V.O.C. is 0.

**10. STABILITY AND REACTIVITY****10.1 Reactivity**

Stable

**10.2 Chemical stability**

Conditions To Avoid: None

**10.3 Possibility of hazardous reactions**

Free hydroxylamine is produced when heated, particularly with alkalis.

**10.4 Conditions to avoid**

No data available

**10.5 Incompatible Materials**

Bases and strong oxidizing agents.

**10.6 Decomposition Products**

May produce oxides of sulfur, carbon, ammonia.

**11. TOXICOLOGICAL INFORMATION****11.1 Information of toxicological effects****Component information*****Hydroxylamine sulfate 10039-54-0*****Acute toxicity:**

LD50 Oral – rat – 642 mg/kg

Dermal:

LD50 Dermal – rabbit – &gt;1,500 - &lt;2,000 mg/kg

Inhalation:

No data available

**Skin irritation:**

Skin-rabbit

Result: Irritating to skin

**Eye irritation:**

Eyes – rabbit

Result: No eye irritation – 24h

**Respiratory or Skin Sensitization**

Maximisation Test – guinea pig

Result: May cause sensitization by skin contact.

**Carcinogenicity**

Carcinogenicity – rat- Oral

Endocrine: Adrenal cortex hyperplasia

No suspected human carcinogens

**Germ cell mutagenicity**

Mouse

Result: negative

**12. ECOLOGICAL INFORMATION****Component information*****Hydroxylamine sulfate 10039-54-0*****12.1 Toxicity**

Toxicity to fish      mortalityLC50- Pimephales promelas (fathead minnow) -7.2 mg/l – 96h

Toxicity to daphnia    EC50 – Daphnia magna (Water flea) – 1.62 mg/l -48h

Toxicity to algae      EC50 – Desmodesmus subspicatus- 0.72 mg/l -72h

Toxicity to bacteria    Respiration inhibition ED50 – Sludge Treatment – 54 mg/l – 180 min

**12.2 Persistence and degradability**

No data available

**12.3 Bioaccumulative potential**

No data available

**12.4 Mobility in soil**

No data available

**12.5 Result of PBT and vPvB assessment**

Assessment not available as chemical assessment not required/not conducted

**12.5 Other adverse effects**

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.  
Very toxic to aquatic life.

**13. DISPOSAL CONSIDERATIONS****13.1 Waste treatment methods****Product**

Preferred options for disposal are to send to licensed reclaimers, or to permitted incinerators. Any disposal practice must be in compliance with federal, state, and local regulations. Do not dump into sewers, ground, or any body of water.

**14. TRANSPORT INFORMATION****DOT (US)**

Not regulated

**15. REGULATORY INFORMATION****SARA 302 Components**

The following components are subject to reporting: None

**SARA 313 Components**

The following components are subject to reporting levels established by SARA Title III, Section 313:  
None

**SARA 311/312 Hazards**

Acute Health Hazard, Chronic Health Hazard

**California Prop 65 Components**

This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

**TSCA**

All ingredients in this finished product are listed on the EPA TSCA INVENTORY.

**SCAQMD Rule 443.1**

Photochemically Reactive: No  
Maximum Grams of VOC per Liter: 0 g/L  
Vapor Pressure: 18 mm Hg@ 20 Degrees C

**16. OTHER INFORMATION****Full text of H-statements referred to under sections 2 and 3.**

Corrosive to metals (Category 1), H290  
Acute toxicity, Oral (Category 4), H302  
Skin irritation (Category 2), H315  
Eye irritation (Category 2A), H319  
Skin sensitization (Category1), H317  
Specific organ toxicity Oral (Category 2), H373

**HMIS RATING**

Health: 2  
Flammability: 0  
Reactivity: 0

OTHER ADDITIONAL INFORMATION: The information contained herein is based on the data available to us and is believed to be accurate. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof. We assume no responsibility for the injuries from the use of the product described herein.

## ARISTA® C-41 DEVELOPER PART C

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Distributor: Freestyle Photographic Supplies

5124 Sunset Blvd., Hollywood, CA 90027

Product Name: **C-41 DEVELOPER PART C**

Product Number: **101202, 101222**

**Product Use:** Photographic developer.

**Customer Information Phone Number:**

1-800-292-6137

**CHEMTREC®: 24 Hour Emergency Transport Phone Number: 1-800-424-9300**

**CHEMTREC®: 24 Hour Emergency Transport Phone Number: 1-800-424-9300**

Date Reviewed: 04/04/2015

Version 3.0

### 2. HAZARDOUS IDENTIFICATION

#### 2.1 Classification of the substance or mixture

##### Health hazard

Acute toxicity, Oral (Category 4), H302

Causes severe skin burns and eye damage (Skin Corr. 1B) H314

Serious eye damage (Category 1), H314

Skin sensitization (Category 2), H317

Germ cell mutagenicity (Category 2), H341

Carcinogenicity (Category 2), H351

Harmful to aquatic life (Category 3), H402

Chronic aquatic toxicity (Category 1), H410

#### 2.2 GHS Label elements, including precautionary statements

##### Pictogram



**Signal Word: DANGER**

Hazard statement(s)

H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H317	May cause allergic skin reaction
H318	Causes severe eye damage
H335	May cause respiratory irritation
H341	Suspected of causing genetic defects
H351	Suspected of causing cancer

# MATERIAL SAFETY DATA SHEET



H402 Harmful to aquatic life.  
H410 Very toxic to aquatic life

## Precautionary statement(s)

P201 Obtain special instructions before use  
P260 Do not breathe dust or mist  
P264 Wash skin thoroughly after handling  
P270 Do not eat, drink, or smoke when using this product  
P273 Avoid release into the environment  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.  
P301 + P312 IF SWALLOWED; call a POISON CENTER or doctor/physician Do NOT induce vomiting  
P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.  
P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P321 Specific treatment (see supplemental first aid instructions on this label).  
P330 Rinse mouth.  
P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.  
P337 + P313 If eye irritation persists: Get medical advice/attention.  
P363 Wash contaminated clothing before reuse  
P391 Collect spillage  
P501 Dispose of contents to an approved waste disposal plant.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS	OHSA PEL	ACGIH TLV	Weight %
CD4	25646-77-9	15 mg/m <sup>3</sup> (dust)	10 mg/m <sup>3</sup>	5-10
SODIUM METABISULFITE	7681-57-4	N.E.	5 mg/m <sup>3</sup>	1-3

## 4. FIRST AID MEASURES

### 4.1 Description of first aid measures

**Eye Contact:** Immediately flush eyes with plenty of water for at least 15 minutes. Get immediate medical attention.

**Inhalation:** If symptomatic, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

**Ingestion:** Do not induce vomiting. Only induce vomiting at the instruction of medical personnel. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

**Skin Contact:** Flush skin with plenty of water and wash with a non-alkaline skin cleaner. Wash contaminated clothes before reuse. Get medical attention if irritation develops.

**Aggravated Medical Conditions:** Individuals who are under the care of a physician or have chronic ailments, should consult a physician before using this product.

## **5. FIRE FIGHTING MEASURES**

### **5.1 Extinguishing media**

Nonflammable. Use agent appropriate for surrounding fire.

### **5.2 Special Hazards arising from substance or mixture**

Fire or excessive heat may cause production of hazardous decomposition products.

Combustion Products: Carbon dioxide, carbon monoxide, and oxides of sulfur.

### **5.3 Advise for firefighters**

Wear self-contained breathing NIOSH/MSHA approved apparatus and protective clothing to prevent contact with skin and eyes. Fire or excessive heat may produce hazardous decomposition products. Use water to keep containers cool.

## **6. ACCIDENTAL RELEASE MEASURES**

### **6.1 Personal precautions, protective equipment and emergency procedures**

Review fire and explosion hazards and safety precautions before proceeding with cleanup. Use appropriate personal protective equipment. Avoid contact with skin and eyes. Stop the spillage. Dike the spill. Absorb spillage in inert material. Soak up with sawdust, sand, or other absorbent material. Remove non-usable solid material and/or contaminated soil for disposal in an approved and permitted landfill.

### **6.2 Environmental precautions**

Prevent liquid from entering sewers, waterways or low areas. Discharge to sewer requires approval of permitting authority and may require pre-treatment. Contaminated surfaces should be cleaned using water.

## **7. HANDLING AND STORAGE**

### **7.1 Precautions for safe handling**

Store in a cool, dry, well-ventilated area. Keep containers closed. Do not store or consume food, drink, or tobacco where they may become contaminated with this material.

### **7.2 Conditions for safe storage, including any incompatibles**

Do not store with incompatible materials. Do not store with strong acids. All labeled precautions must be observed when handling, storing and transporting empty containers due to product residues. Triple rinse before disposal. Dispose of in a licensed facility.

## **8. EXPOSURE CONTROL / PERSONAL PROTECTION**

### **8.1 Control parameters**

See Section 3.

### **8.2 Exposure controls**

Use good personal hygiene when handling this product. Wash hands after use, before smoking, or using the toilet. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

**Personal protective equipment**

**Eye Protection:** Safety glasses with side shields (or goggles).

**Respiratory Protection:** If use conditions generate decomposition vapors or fumes; use a NIOSH approved respirator with acid gas cartridges.

**Skin protection:** Latex, rubber, or neoprene waterproof gloves are recommended.

**Body protection:** Rubber or plastic apron.

**Respiratory protection:** Local exhaust ventilation is recommended. Ventilation must be adequate to keep hazardous ingredients below their exposure limits, typically 10 air changes per hour.

**9. PHYSICAL AND CHEMICAL PROPERTIES****9.1 Information on basic physical and chemical properties**

Appearance And Odor: Light straw color, sharp vinegar odor.

Solubility In Water: Complete

Boiling Point: > 100° C

Flash Point: Nonflammable

Flash Point Method: Not applicable

Auto ignition: Not applicable

LEL: Not applicable

UEL: Not applicable

Vapor Pressure: Not established

Ph: 2.42

Specific Gravity: 1.036 g/ml

Melting Point: Not applicable

Freezing Point: N.E.

Evaporation Rate: > 1

Vapor Density: 0.6 (air=1)

Percent Volatile: 91.32

Molecular Weight: Not applicable

Pounds Per Gallon: 8.63

V.O.C. is 0.

**10. STABILITY AND REACTIVITY****10.1 Reactivity**

Stable

**10.2 Chemical stability**

Conditions To Avoid: High temperatures

**10.3 Possibility of hazardous reactions**

None

## 10.4 Conditions to avoid

No data available

## 10.5 Incompatible Materials

Bases and strong oxidizing agents.

## 10.6 Decomposition Products

May produce oxides of sulfur, carbon, and nitrogen.

## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information of toxicological effects

#### Component information

#### **CD-4 25646-77-9**

##### **Acute toxicity:**

LD50 Oral – rat – 35 mg/kg

Dermal:

No data available

Inhalation:

No data available

##### **Skin irritation:**

No data available

##### **Eye irritation:**

No data available

##### **Respiratory or Skin Sensitization**

No data available

##### **Carcinogenicity**

No data available

##### **Germ cell mutagenicity**

No data available

#### **Sodium Metabisulfite 7681-57-4**

##### **Acute toxicity:**

No data available

LD50 Oral - Rat - 1,540 mg/kg (OECD Test Guideline 401)

Inhalation: No data available Inhalation:

Dermal: No data available

LD50 Dermal - Rat - > 2,000 mg/kg

##### **Skin corrosion/irritation :**

No data available

##### **Serious eye damage/eye irritation**

Eyes - Rabbit

Result: Risk of serious damage to eyes. (OECD Test Guideline 405)

**Respiratory or skin sensitisation**

Prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals.

**Germ cell mutagenicity**

No data available

**Carcinogenicity**

**IARC: 3** - Group 3: Not classifiable as to its carcinogenicity to humans (Sodium sulphite) IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (Sodium metabisulphite)

**NTP:** No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

**OSHA:** No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**Reproductive toxicity**

No data available No data available

**Specific target organ toxicity** - single exposure

No data available Specific target organ toxicity - repeated exposure No data available

**Aspiration hazard**

No data available

**12. ECOLOGICAL INFORMATION****Component information****CD-4 25646-77-9**

*Data is available on the adverse effects of this material on the environment. Neither COD nor BOD data are available... Based on the chemical composition of this product it is assumed that the mixture can be treated in an acclimatized biological waste treatment plant in limited quantities. However, such treatment should be evaluated and proved for each specific biological system.*

**Sodium Metabisulfite 7681-57-4****12.1 Toxicity**

Toxicity to fish LC50 - Oncorhynchus mykiss (rainbow trout) - 150 - 220 mg/l - 96 h

Toxicity to daphnia and other aquatic invertebrates EC50 - Daphnia magna (Water flea) 89 mg/l - 24 h

Toxicity to algae IC50 - Desmodesmus subspicatus (green algae) - 48 mg/l - 72 h

Toxicity to bacteria - Pseudomonas putida - 56 mg/l - 17 h 12.2

**12.2 Persistence and degradability** No data available**12.3 Bioaccumulative potential**

No data available

**12.4 Mobility in soil**

No data available

**12.5 Results of PBT and vPvB assessment**

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

**12.6 Other adverse effects**

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.  
Harmful to aquatic life.

**13. DISPOSAL CONSIDERATIONS****13.1 Waste treatment methods****Product**

Preferred options for disposal are to send to licensed reclaimers, or to permitted incinerators. Any disposal practice must be in compliance with federal, state, and local regulations. Do not dump into sewers, ground, or any body of water.

**14. TRANSPORT INFORMATION****DOT (US)**

DOT Class: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.

(Contains: Ethanol, 2-[(4-Amino-3-Methylphenyl)Ethylamino]-, Sulfate (1:1) (salt)

Hazard Class: 8

UN No.: 3265

Packing Group: III

Guide No: 153

Ship Name: PHOTOGRAPHIC DEVELOPER

Limited Quantity Exception may apply to this product, for "inner packagings not over 1.0L (0.3 gal) for liquids and 1.0 kg (2.2 lb) for solids". 173.154 (b) (1). Each package must conform to the packaging requirements of Subpart B of Part 173 and may not exceed 30 kg (66 lb) gross weight. For further information consult the 49 CFR.

DOT Class: CONSUMER COMMODITY, ORM-D

Hazard Class: NOT APPLICABLE

UN No.: NOT APPLICABLE

Packing Group: NOT APPLICABLE

Guide No: NOT APPLICABLE

Ship Name: NOT APPLICABLE

Not regulated

**15. REGULATORY INFORMATION****SARA 302 Components**

The following components are subject to reporting: None

**SARA 313 Components**

The following components are subject to reporting levels established by SARA Title III, Section 313:  
None

**SARA 311/312 Hazards**

Acute Health Hazard, Chronic Health Hazard

# MATERIAL SAFETY DATA SHEET



## California Prop 65 Components

This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

## TSCA

All ingredients in this finished product are listed on the EPA TSCA INVENTORY.

## SCAQMD Rule 443.1

Photochemically Reactive: No

Maximum Grams of VOC per Liter: 0 g/L

Vapor Pressure: 18 mm Hg@ 20 Degrees C

## 16. OTHER INFORMATION

**Full text of H-statements referred to under sections 2 and 3.**

Acute toxicity, Oral (Category 4), H302

Causes severe skin burns and eye damage (Skin Corr. 1B) H314

Serious eye damage (Category 1), H314

Skin sensitization (Category 2), H317

Germ cell mutagenicity (Category 2), H341

Carcinogenicity (Category 2), H351

Harmful to aquatic life (Category 3), H402

Chronic aquatic toxicity (Category 1), H410

## HMIS RATING

Health: 2

Flammability: 0

Reactivity: 0

OTHER ADDITIONAL INFORMATION: The information contained herein is based on the data available to us and is believed to be accurate. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof. We assume no responsibility for the injuries from the use of the product described herein.

## Safety data sheet according to 1907/2006/EC, Article 31

Printing date 04.03.2015

Version 2

Revision: 20.01.2015



### SECTION 1: Identification of the substance/mixture and of the company/undertaking

- **1.1 Product identifier**
- **Trade name: C-41 KIT CD-A**


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- **Article number:** 13025, 13026, 13027
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**  
To this day we do not have any information about the identified use at the moment. These data are available we will add these to the safety data sheet.
- **Application of the substance / the mixture**  
Photographic activities  
Consumer use  
Photochemicals  
Photographic developer  
Colour film photographic processing solution
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Calbe Chemie GmbH  
Stadtfeld 31  
D-39240 Calbe  
Tel.: +49 (0)39291 425-0  
Fax: +49 (0)39291 425-25  
e-mail: info@calbe-chemie.de  
www.calbe-chemie.de
- **Informing department:**  
Tel.: +49 (0)39291 42515  
E-Mail: kr@calbe-chemie.de
- **1.4 Emergency telephone number:** Tel.: 0700-24112112 (CAL)

### SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
- 
**GHS05 corrosion**  
  
 Eye Dam. 1 H318 Causes serious eye damage.
- 
**GHS07**  
  
 Skin Irrit. 2 H315 Causes skin irritation.  
 STOT SE 3 H335 May cause respiratory irritation.

---

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**
- 
**Xi; Irritant**  
 R36/37/38: Irritating to eyes, respiratory system and skin.
- **Information concerning particular hazards for human and environment:**  
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
- **Classification system:**  
The classification is in line with current EC lists. It is expanded, however, by information from technical literature and by information furnished by supplier companies.

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### according to 1907/2006/EC, Article 31

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- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**  
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**







GHS05 GHS07

- **Signal word** Danger
- **Hazard-determining components of labelling:**  
1-hydroxy-1,1-diphosphon acid  
potassium carbonate
- **Hazard statements**  
H315 Causes skin irritation.  
H318 Causes serious eye damage.  
H335 May cause respiratory irritation.
- **Precautionary statements**  
P101 If medical advice is needed, have product container or label at hand.  
P102 Keep out of reach of children.  
P280 Wear protective gloves / eye protection.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P310 Immediately call a POISON CENTER/doctor.  
P302+P352 IF ON SKIN: Wash with plenty of water.  
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

## SECTION 3: Composition/information on ingredients

- **3.2 Mixtures**
- **Description:** Mixture of the substances listed below with harmless additions.

### • **Dangerous components:**

CAS: 584-08-7 EINECS: 209-529-3 Reg.nr.: 01-2119532646-36-xxxx	potassium carbonate  Xi R36/37/38  Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	25-50%
CAS: 139-89-9 EINECS: 205-381-9 Reg.nr.: 01-2119972845-22-xxxx	Hydroxyethylethylenediaminetriacetic acid, trisodium salt, solution  Xi R36/38  Skin Irrit. 2, H315; Eye Irrit. 2, H319	2.0-5.0%

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### according to 1907/2006/EC, Article 31









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CAS: 2809-21-4 EINECS: 220-552-8 Reg.nr.: 01-2119510391-53-xxxx	1-hydroxy-1,1-diphosphon acid  C R34  Xn R22  Xi R41  Met. Corr.1, H290; Skin Corr. 1B, H314	2.0-5.0%
CAS: 1310-58-3 EINECS: 215-181-3 Index number: 019-002-00-8 Reg.nr.: 01-2119487136-33-xxxx	potassium hydroxide  C R35  Xn R22  Met. Corr.1, H290; Skin Corr. 1A, H314  Acute Tox. 4, H302	0.5-2.0%

• **Additional information** For the wording of the listed risk phrases refer to section 16.

## SECTION 4: First aid measures

### • 4.1 Description of first aid measures

#### • General information

Personal protection for the First Aider.  
Instantly remove any clothing soiled by the product.

• **After inhalation** Supply fresh air; consult doctor in case of symptoms.

#### • After skin contact

Instantly rinse with water.  
If skin irritation continues, consult a doctor.

#### • After eye contact

Rinse opened eye for several minutes under running water (at least 15 minutes).  
Remove contact lenses, if present and easy to do.  
Use eye protection.  
Call a doctor immediately.

#### • After swallowing

Rinse out mouth and then drink plenty of water.  
Do not induce vomiting; instantly call for medical help.

### • 4.2 Most important symptoms and effects, both acute and delayed

No further relevant information available.

### • 4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

## SECTION 5: Firefighting measures

### • 5.1 Extinguishing media

#### • Suitable extinguishing agents

CO<sub>2</sub>, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.  
Use fire fighting measures that suit the environment.

• **For safety reasons unsuitable extinguishing agents** Water with a full water jet.

### • 5.2 Special hazards arising from the substance or mixture

Can be released in case of fire  
Carbon monoxide  
sulphur dioxide (SO<sub>2</sub>)

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- **5.3 Advice for firefighters**
- **Protective equipment:**  
Do not inhale explosion gases or combustion gases.  
Use a breathing protection if high concentrations are present.
- **Additional information** The product is not flammable

### SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.  
Particular danger of slipping on leaked/spilled product.
- **6.2 Environmental precautions:** Do not allow to enter drainage system, surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Dispose of contaminated material as waste according to item 13.
- **6.4 Reference to other sections**  
See Section 8 for information on personal protection equipment.  
See Section 13 for information on disposal.

### SECTION 7: Handling and storage

- **7.1 Precautions for safe handling** Keep away from heat and direct sunlight.
- **Information about protection against explosions and fires:**  
No special measures required.  
The product is not flammable
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and containers:** No special requirements.
- **Information about storage in one common storage facility:**  
Keep away from foodstuffs, beverages and food.
- **Further information about storage conditions:**  
Keep container tightly sealed.  
Store in a cool place.
- **Recommended storage temperature:** 5-25 °C
- **Storage class**  
LGK 12  
(German Technical Rule for Hazardous Substance – TRGS 510)
- **7.3 Specific end use(s)** No further relevant information available.

### SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see section 7.

#### · 8.1 Control parameters

- **Components with limit values that require monitoring at the workplace:**

**1310-58-3 potassium hydroxide**

WEL Short-term value: 2 mg/m<sup>3</sup>

- **Additional information:** The lists that were valid during the compilation were used as basis.

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#### · 8.2 Exposure controls

#### · Personal protective equipment

#### · General protective and hygienic measures

The usual precautionary measures should be adhered to general rules for handling chemicals.

Keep away from foodstuffs, beverages and food.

Do not eat, drink or smoke while working.

Take off immediately all contaminated clothing.

Wash contaminated clothing before reuse.

Wash hands during breaks and at the end of the work.

Avoid contact with the eyes and skin.

#### · Breathing equipment: Not required.

#### · Protection of hands:

Protective gloves.

The protective gloves to be used must comply with the specifications of the EC directive 89/686/EEC and the resultant standard EN 374.

This recommendation applies only to the product stated in the Safety Data Sheet and supplied by us as well as to the purpose specified by us.

Only use chemical-protective gloves with CE-labelling of category III.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

#### · Material of gloves

	Thickness (mm)	Breakthrough time (min)
Nitril rubber	0,38	> 480
Neoprene	0,65	> 240
Butyl rubber	0,36	> 480

Avoid natural rubber gloves.

#### · As protection from splashes gloves made of the following materials are suitable:

Synthetic gloves

Value for permeation: Level:

≥ 3 (60 min)

#### · Eye protection: Safety glasses

#### · Body protection: Light weight protective clothing

## SECTION 9: Physical and chemical properties

### · 9.1 Information on basic physical and chemical properties

#### · General Information

#### · Appearance:

<b>Form:</b>	Fluid
<b>Colour:</b>	Colourless
	Clear

#### · Odour: Not characteristic

#### · pH-value (100 g/l) at 20 °C: 10.8

#### · Change in condition

**Melting point/Melting range:** Not determined

**Boiling point/Boiling range:** > 100 °C

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- |  |                              |
|--|------------------------------|
| · <b>Flash point:</b>                            | Not applicable               |
| · <b>Inflammability (solid, gaseous)</b>         | Not applicable               |
| · <b>Ignition temperature:</b>                   | Not applicable               |
| · <b>Decomposition temperature:</b>              | Not applicable               |
| · <b>Self-inflammability:</b>                    | Product is not selfigniting. |
| · <b>Danger of explosion:</b>                    | Product is not explosive.    |
| · <b>Critical values for explosion:</b>          |                              |
| Lower:   | Not applicable               |
| Upper:   | Not applicable               |
| · <b>Oxidising properties</b>                    | Not applicable               |
| · <b>Vapour pressure at 20 °C:</b>               | 23 hPa                       |
| · <b>Density at 20 °C</b>                        | 1.34 g/cm <sup>3</sup>       |
| · <b>Solubility in / Miscibility with Water:</b> | miscible                     |
| · <b>Viscosity:</b>                              |                              |
| dynamic:   | Not determined               |
| kinematic:                                       | Not determined               |
| · <b>Solvent content:</b>                        |                              |
| Organic solvents:                                | 0.0 %                        |
| Water:   | ~ 60 %                       |
| · <b>9.2 Other information</b>                   | None                         |

### SECTION 10: Stability and reactivity

- **10.1 Reactivity**
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** Reacts with strong acids
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known

### SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity:**
- **LD/LC50 values that are relevant for classification:**

#### 584-08-7 potassium carbonate

Oral	LD50	> 2000 mg/kg (rat)
------	------	--------------------

#### 2809-21-4 1-hydroxy-1,1-diphosphon acid

Oral	LD50	2400 mg/kg (rat)
------	------	------------------

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Dermal	LD50	3500 mg/kg (rat)
<b>1310-58-3 potassium hydroxide</b>		
Oral	LD50	365 mg/kg (rat)

- **Primary irritant effect:**
  - **on the skin:** Irritant to skin and mucous membranes.
  - **on the eye:** Strong irritant with the danger of severe eye injury.
- **Sensitisation:** No sensitizing effect known.
- **Other information (about experimental toxicology):** Not determined
- **Additional toxicological information:**

This statement was deduced from the properties of the single components.  
The product shows the following dangers according to the calculation method of the General EC Classification Guidelines for Preparations as issued in the latest version:  
Irritant
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**  
No known symptoms to date.

### SECTION 12: Ecological information

- **12.1 Toxicity**
  - **Aquatic toxicity:**  
Not determined
- |                                      |  |                                    |
|--------------------------------------|--|------------------------------------|
| <b>584-08-7 potassium carbonate</b>  |  |                                    |
| EC50/48 h                            |  | 380-820 mg/l (Daphnia magna)       |
| LC50/96 h                            |  | 310-750 mg/l (Pimephales promelas) |
| <b>1310-58-3 potassium hydroxide</b> |  |                                    |
| LC50/96 h                            |  | 80 mg/l (Gambusia affinis)         |
- **12.2 Persistence and degradability** Not determined
  - **12.3 Bioaccumulative potential** Not determined
  - **Behaviour in environmental systems:** Not determined
  - **12.4 Mobility in soil** No further relevant information available.
  - **Ecotoxic effects:** No further relevant information available.
  - **Behaviour in sewage processing plants:** Not determined
  - **Additional ecological information:**
  - **General notes:**  
At present there are no ecotoxicological assessments.  
This statement was deduced from the properties of the single components.  
Water hazard class 2 (German Regulation) (Self-assessment): Water-endangering.
  - **12.5 Results of PBT and vPvB assessment**
  - **PBT:** Not applicable.
  - **vPvB:** Not applicable.
  - **12.6 Other adverse effects** No further relevant information available.

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### SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**

· **Recommendation**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Must be specially treated under adherence to official regulations.

· **European waste catalogue**

09 01 01*	water-based developer and activator solutions
-----------	---

· **Uncleaned packagings:**

· **Recommendation:**

Non contaminated packagings can be used for recycling.

Empty contaminated packagings thoroughly. They can be recycled after thorough and proper cleaning.

Packagings that cannot be cleaned are to be disposed of in the same manner as the product.

EAK-No. 15 01 10

· **Recommended cleaning agent:** Water, if necessary with cleaning agent.

### SECTION 14: Transport information

· **14.1 UN-Number**

· **ADR, ADN, IMDG, IATA**

Void

· **14.2 UN proper shipping name**

· **ADR**

Void

· **ADN, IMDG, IATA**

Void

· **14.3 Transport hazard class(es)**

· **ADR, ADN, IMDG, IATA**

· **Class**

Void

· **14.4 Packing group**

· **ADR, IMDG, IATA**

Void

· **14.5 Environmental hazards:**

Not applicable.

· **14.6 Special precautions for user**

Not applicable.

· **14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

Not applicable.

· **Transport/Additional information:**

Not dangerous according to the above specifications.

· **UN "Model Regulation":**

-

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### SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **National regulations**
- **Water hazard class:** Water hazard class 2 (Self-assessment): water-endangering.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### SECTION 16: Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

#### • Relevant phrases

H290	May be corrosive to metals.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
R22	Harmful if swallowed.
R34	Causes burns.
R35	Causes severe burns.
R36/37/38	Irritating to eyes, respiratory system and skin.
R36/38	Irritating to eyes and skin.
R41	Risk of serious damage to eyes.

#### • Department issuing data specification sheet:

Laboratory  
Tel.: +49 (0)39291 425-15

#### • Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)  
ICAO: International Civil Aviation Organisation  
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)  
IMDG: International Maritime Code for Dangerous Goods  
IATA: International Air Transport Association  
GHS: Globally Harmonised System of Classification and Labelling of Chemicals  
EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINCS: European List of Notified Chemical Substances  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent  
Met. Corr. 1: Corrosive to metals, Hazard Category 1  
Acute Tox. 4: Acute toxicity, Hazard Category 4  
Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A  
Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B  
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2  
Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1  
Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2  
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

#### • Sources

Internal physical tests, MSDS of the ingredients,  
Information system on hazardous substances of the German Social Accident Insurance  
(GESTIS-database on hazardous substances), <http://www.dguv.de/ifa/en/gestis/stoffdb/index.jsp>

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applicable EEC directives:

- 1999/45
- 1907/2006
- 1272/2008

· \* **Data compared to the previous version altered.**

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### SECTION 1: Identification of the substance/mixture and of the company/undertaking

- **1.1 Product identifier**
- **Trade name: C-41 KIT CD-B**



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- **Article number:** 13025, 13026, 13027
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**  
To this day we do not have any information about the identified use at the moment. These data are available we will add these to the safety data sheet.
- **Application of the substance / the mixture**  
Photographic activities  
Photochemicals  
Photographic developer  
Colour film photographic processing solution
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Calbe Chemie GmbH  
Stadtfeld 31  
D-39240 Calbe  
Tel.: +49 (0)39291 425-0  
Fax: +49 (0)39291 425-25  
e-mail: info@calbe-chemie.de  
www.calbe-chemie.de
- **Informing department:**  
Tel.: +49 (0)39291 42515  
E-Mail: kr@calbe-chemie.de
- **1.4 Emergency telephone number:** Tel.: 0700-24112112 (CAL)

### SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
- 
**GHS08 health hazard**  
  
Carc. 2      H351 Suspected of causing cancer.
- 
**GHS07**  
  
Skin Sens. 1    H317 May cause an allergic skin reaction.

---

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**
- 
**Xn; Harmful**  
R40: Limited evidence of a carcinogenic effect.
- 
**Xi; Sensitising**  
R43: May cause sensitisation by skin contact.
- **Information concerning particular hazards for human and environment:**  
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

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#### Classification system:

The classification is in line with current EC lists. It is expanded, however, by information from technical literature and by information furnished by supplier companies.

#### 2.2 Label elements

##### Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

##### Hazard pictograms



GHS07 GHS08

##### Signal word Warning

##### Hazard-determining components of labelling:

bis(hydroxylammonium) sulphate

##### Hazard statements

H317 May cause an allergic skin reaction.

H351 Suspected of causing cancer.

##### Precautionary statements

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P280 Wear protective gloves.

P201 Obtain special instructions before use.

P308+P313 If exposed or concerned: Get medical advice/attention.

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

#### 2.3 Other hazards

##### Results of PBT and vPvB assessment

**PBT:** Not applicable.










**vPvB:** Not applicable.

## SECTION 3: Composition/information on ingredients

#### 3.2 Mixtures

**Description:** Mixture of the substances listed below with harmless additions.

##### Dangerous components:

CAS: 10039-54-0 EINECS: 233-118-8 Index number: 612-123-00-2 Reg.nr.: 01-2119485971-25-xxxx	bis(hydroxylammonium) sulphate  Xn R21/22-40-48/22  Xi R36/38  Xi R43  E R2  N R50 Carc. Cat. 3  Carc. 2, H351; STOT RE 2, H373  Met. Corr.1, H290  Aquatic Acute 1, H400  Acute Tox. 4, H302; Acute Tox. 4, H312; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317	2.0-5.0%
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- **Additional information** For the wording of the listed risk phrases refer to section 16.

**SECTION 4: First aid measures**

- **4.1 Description of first aid measures**
- **General information**  
Personal protection for the First Aider.  
Instantly remove any clothing soiled by the product.
- **After skin contact** Instantly wash with water and soap and rinse thoroughly.
- **After eye contact**  
Rinse opened eye for several minutes under running water (> 15 min). Then consult doctor.
- **After swallowing** Rinse out mouth and then drink plenty of water.
- **4.2 Most important symptoms and effects, both acute and delayed**  
No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

**SECTION 5: Firefighting measures**

- **5.1 Extinguishing media**
- **Suitable extinguishing agents**  
CO<sub>2</sub>, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.  
Use fire fighting measures that suit the environment.
- **For safety reasons unsuitable extinguishing agents** Water with a full water jet.
- **5.2 Special hazards arising from the substance or mixture**  
Can be released in case of fire  
sulphur dioxide (SO<sub>2</sub>)  
Nitrogen oxides (NO<sub>x</sub>)
- **5.3 Advice for firefighters**
- **Protective equipment:**  
Do not inhale explosion gases or combustion gases.  
At formation of toxic gases:  
Put on breathing apparatus.
- **Additional information** The product is not flammable

**SECTION 6: Accidental release measures**

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Wear protective clothing.
- **6.2 Environmental precautions:** Do not allow to enter drainage system, surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Dispose of contaminated material as waste according to item 13.
- **6.4 Reference to other sections**  
See Section 8 for information on personal protection equipment.

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See Section 13 for information on disposal.

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**SECTION 7: Handling and storage**

- **7.1 Precautions for safe handling**  
Do not handle until all safety precautions have been read and understood.
- **Information about protection against explosions and fires:** No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and containers:**  
Store only in the original container.  
Keep container tightly sealed.
- **Information about storage in one common storage facility:**  
Keep away from foodstuffs, beverages and food.
- **Further information about storage conditions:**  
Protect from heat and direct sunlight.  
Store in a cool place.
- **Recommended storage temperature:** 5-25 °C
- **Storage class**  
LGK 12  
(German Technical Rule for Hazardous Substance – TRGS 510)
- **7.3 Specific end use(s)** No further relevant information available.

**SECTION 8: Exposure controls/personal protection**

- **Additional information about design of technical systems:** No further data; see section 7.
- **8.1 Control parameters**
- **Components with limit values that require monitoring at the workplace:**
- **Additional information:** The lists that were valid during the compilation were used as basis.
- **8.2 Exposure controls**
- **Personal protective equipment**
- **General protective and hygienic measures**  
The usual precautionary measures should be adhered to general rules for handling chemicals.  
Keep away from foodstuffs, beverages and food.  
Take off immediately all contaminated clothing.  
Wash contaminated clothing before reuse.  
Wash hands during breaks and at the end of the work.  
Avoid contact with the eyes and skin.  
Do not eat, drink or smoke while working.
- **Breathing equipment:** Not necessary if room is well-ventilated.
- **Protection of hands:**  
Protective gloves.  
The protective gloves to be used must comply with the specifications of the EC directive 89/686/EEC and the resultant standard EN 374.  
This recommendation applies only to the product stated in the Safety Data Sheet and supplied by us as well as to the purpose specified by us.
- **Material of gloves**

	Thickness	Breakthrough time
	(mm)	(min)
Nitril rubber	0,38	> 480

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Neoprene 0,65 > 240  
Butyl rubber 0,36 > 480  
Avoid natural rubber gloves.

• **As protection from splashes gloves made of the following materials are suitable:**

Synthetic gloves

Value for permeation: Level:

≥ 3 (60 min)

• **Eye protection:** Safety glasses

• **Body protection:** Light weight protective clothing

## SECTION 9: Physical and chemical properties

• **9.1 Information on basic physical and chemical properties**

• **General Information**

• **Appearance:**

**Form:** Fluid  
**Colour:** Colourless  
Clear

• **Odour:** Odourless

• **Odour threshold:** Not applicable

• **pH-value at 20 °C:** 3.5

• **Change in condition**

**Melting point/Melting range:** Not determined

**Boiling point/Boiling range:** > 100 °C

• **Flash point:** Not applicable

• **Inflammability (solid, gaseous)** Not applicable

• **Ignition temperature:** Not applicable

• **Decomposition temperature:** Not applicable

• **Self-inflammability:** Product is not selfigniting.

• **Danger of explosion:** Product is not explosive.

• **Critical values for explosion:**

**Lower:** Not applicable

**Upper:** Not applicable

• **Oxidising properties** Not applicable

• **Vapour pressure at 20 °C:** 23 hPa

• **Density at 20 °C** 1.023 g/cm<sup>3</sup>

• **Relative density** Not determined.

• **Vapour density** Not determined.

• **Evaporation rate** Not determined.

• **Solubility in / Miscibility with**

**Water:** miscible

• **Partition coefficient (n-octanol/water):** Not determined.

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- |                                |  |
|--------------------------------|--|
| <b>· Viscosity:</b>            |  |
| <b>dynamic:</b>                | Not determined                             |
| <b>kinematic:</b>              | Not determined                             |
| <b>· Solvent content:</b>      |  |
| <b>Organic solvents:</b>       | 0.0 %                                      |
| <b>Water:</b>                  | ~ 96 %                                     |
| <b>· 9.2 Other information</b> | No further relevant information available. |

### SECTION 10: Stability and reactivity

- **10.1 Reactivity**
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known

### SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

#### 10039-54-0 bis(hydroxylammonium) sulphate

Oral	LD50	620 mg/kg (rat)
Dermal	LD50	1750 mg/kg (rab)

- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritant effect.
- **Sensitisation:** Sensitization possible by skin contact.
- **Other information (about experimental toxicology):** Not determined
- **Subacute to chronic toxicity:**  
Harmful: danger of serious damage to health by prolonged exposure if swallowed.
- **Additional toxicological information:**  
This statement was deduced from the properties of the single components.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**  
Limited evidence of a carcinogenic effect.  
Carc. 2

GB

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### SECTION 12: Ecological information

#### 12.1 Toxicity

##### Aquatic toxicity:

##### 10039-54-0 bis(hydroxylammonium) sulphate

EC50/48 h 1.62 mg/l (Daphnia magna)

LC50/96 h 7.2 mg/l (Pimephales promelas)

#### 12.2 Persistence and degradability Not determined

#### 12.3 Bioaccumulative potential Not determined

#### Behaviour in environmental systems: Not determined

#### 12.4 Mobility in soil No further relevant information available.

#### Ecotoxic effects: Not determined

#### Behaviour in sewage processing plants: Not determined

#### Additional ecological information:

##### General notes:

Water hazard class 2 (German Regulation) (Self-assessment): Water-endangering.

Do not allow product to reach ground water, water bodies or sewage system.

At present there are no ecotoxicological assessments.

This statement was deduced from the properties of the single components.

#### 12.5 Results of PBT and vPvB assessment

##### PBT: Not applicable.

##### vPvB: Not applicable.

#### 12.6 Other adverse effects No further relevant information available.

### SECTION 13: Disposal considerations

#### 13.1 Waste treatment methods

##### Recommendation

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Must be specially treated under adherence to official regulations.

Small amounts may be diluted with plenty of water and washed away. Dispose of bigger amounts in accordance with Local Authority requirements.

##### European waste catalogue

09 01 01\* water-based developer and activator solutions

##### Uncleaned packagings:

##### Recommendation:

Non contaminated packagings can be used for recycling.

Empty contaminated packagings thoroughly. They can be recycled after thorough and proper cleaning.

##### Recommended cleaning agent: Water, if necessary with cleaning agent.

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### SECTION 14: Transport information

· <b>14.1 UN-Number</b>	
· <b>ADR, ADN, IMDG, IATA</b>	Void
· <b>14.2 UN proper shipping name</b>	
· <b>ADR, ADN, IMDG, IATA</b>	Void
· <b>14.3 Transport hazard class(es)</b>	
· <b>ADR, ADN, IMDG, IATA</b>	
· <b>Class</b>	Void
· <b>14.4 Packing group</b>	
· <b>ADR, IMDG, IATA</b>	Void
· <b>14.5 Environmental hazards:</b>	Not applicable.
· <b>14.6 Special precautions for user</b>	Not applicable.
· <b>14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
· <b>Transport/Additional information:</b>	Not dangerous according to the above specifications.
· <b>UN "Model Regulation":</b>	-

### SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **National regulations**
- **Information about limitation of use:**  
Employment restrictions concerning pregnant and lactating women must be observed.
- **Water hazard class:** Water hazard class 2 (Self-assessment): water-endangering.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### SECTION 16: Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**

- H290 May be corrosive to metals.
- H302 Harmful if swallowed.
- H312 Harmful in contact with skin.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H319 Causes serious eye irritation.
- H351 Suspected of causing cancer.
- H373 May cause damage to organs through prolonged or repeated exposure.
- H400 Very toxic to aquatic life.
- R2 Risk of explosion by shock, friction, fire or other sources of ignition.
- R21/22 Harmful in contact with skin and if swallowed.

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R36/38 Irritating to eyes and skin.  
R40 Limited evidence of a carcinogenic effect.  
R43 May cause sensitisation by skin contact.  
R48/22 Harmful: danger of serious damage to health by prolonged exposure if swallowed.  
R50 Very toxic to aquatic organisms.

• **Department issuing data specification sheet:**

Laboratory

Tel.: +49 (0)39291 425-15

• **Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organisation

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Met. Corr. 1: Corrosive to metals, Hazard Category 1

Acute Tox. 4: Acute toxicity, Hazard Category 4

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2

Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

Carc. 2: Carcinogenicity, Hazard Category 2

STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2

Aquatic Acute 1: Hazardous to the aquatic environment - Acute Hazard, Category 1

• **Sources**

Internal physical tests, MSDS of the ingredients,

Information system on hazardous substances of the German Social Accident Insurance

(GESTIS-database on hazardous substances), <http://www.dguv.de/ifa/en/gestis/stoffdb/index.jsp>

applicable EEC directives:

- 1999/45

- 1907/2006

- 1272/2008

• **\* Data compared to the previous version altered.**

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### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1 Product identifier

Trade name: **C-41 KIT CD-C**

Article number: 13025, 13026 13027

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

To this day we do not have any information about the identified use at the moment. These data are available we will add these to the safety data sheet.

#### Application of the substance / the mixture

Photographic activities  
Consumer use  
Photochemicals  
Photographic developer  
Colour film photographic processing solution

#### 1.3 Details of the supplier of the safety data sheet

##### Manufacturer/Supplier:

Calbe Chemie GmbH  
Stadtfeld 31  
D-39240 Calbe  
Tel.: +49 (0)39291 425-0  
Fax: +49 (0)39291 425-25  
e-mail: info@calbe-chemie.de  
www.calbe-chemie.de

##### Informing department:

Tel.: +49 (0)39291 42515  
E-Mail: kr@calbe-chemie.de

1.4 Emergency telephone number: Tel.: 0700-24112112 (CAL)

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

##### Classification according to Regulation (EC) No 1272/2008



GHS08 health hazard

STOT RE 2      H373 May cause damage to organs through prolonged or repeated exposure.



GHS09 environment

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.



GHS07

Acute Tox. 4      H302 Harmful if swallowed.

Skin Sens. 1      H317 May cause an allergic skin reaction.

##### Classification according to Directive 67/548/EEC or Directive 1999/45/EC



Xn; Harmful

R22-48/22: Harmful if swallowed. Harmful: danger of serious damage to health by prolonged exposure if swallowed.

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Xi; Sensitising

R43: May cause sensitisation by skin contact.



N; Dangerous for the environment

R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

• **Information concerning particular hazards for human and environment:**

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

• **Classification system:**

The classification is in line with current EC lists. It is expanded, however, by information from technical literature and by information furnished by supplier companies.

• **2.2 Label elements**

• **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

• **Hazard pictograms**



GHS07 GHS08 GHS09

• **Signal word** Warning

• **Hazard-determining components of labelling:**

4-(N-ethyl-N-2-hydroxyethyl)-2-methylphenylenediamine sulphate

• **Hazard statements**

H302 Harmful if swallowed.

H317 May cause an allergic skin reaction.

H373 May cause damage to organs through prolonged or repeated exposure.

H411 Toxic to aquatic life with long lasting effects.

• **Precautionary statements**

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P280 Wear protective gloves / eye protection.

P273 Avoid release to the environment.

P363 Wash contaminated clothing before reuse.

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

• **2.3 Other hazards**

• **Results of PBT and vPvB assessment**

• **PBT:** Not applicable.

• **vPvB:** Not applicable.

**SECTION 3: Composition/information on ingredients**

• **3.2 Mixtures**

• **Description:** Mixture of the substances listed below with harmless additions.

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### · Dangerous components:

CAS: 25646-77-9 EINECS: 247-162-0 Index number: 612-133-00-7	4-(N-ethyl-N-2-hydroxyethyl)-2-methylphenylenediamine sulphate  T R25  Xn R48/22  Xi R43  N R50/53 <hr/>  Acute Tox. 3, H301  STOT RE 2, H373  Aquatic Acute 1, H400; Aquatic Chronic 1, H410  Skin Sens. 1, H317	5.0-10%
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· **Additional information** For the wording of the listed risk phrases refer to section 16.

## SECTION 4: First aid measures

### · 4.1 Description of first aid measures

#### · General information

Personal protection for the First Aider.

Instantly remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 24 hours after the accident.

· **After skin contact** Instantly wash with water and soap and rinse thoroughly.

#### · After eye contact

Rinse opened eye for several minutes under running water (at least 15 minutes).

Remove contact lenses, if present and easy to do.

Use eye protection.

Call a doctor immediately.

#### · After swallowing

Rinse out mouth and then drink plenty of water.

Instantly call for doctor.

### · 4.2 Most important symptoms and effects, both acute and delayed

No further relevant information available.

### · 4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

## SECTION 5: Firefighting measures

### · 5.1 Extinguishing media

#### · Suitable extinguishing agents

CO<sub>2</sub>, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.

Use fire fighting measures that suit the environment.

· **For safety reasons unsuitable extinguishing agents** Water with a full water jet.

### · 5.2 Special hazards arising from the substance or mixture

Can be released in case of fire

Nitrogen oxides (NO<sub>x</sub>)

Carbon monoxide

sulphur dioxide (SO<sub>2</sub>)

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- **5.3 Advice for firefighters**
- **Protective equipment:**  
Do not inhale explosion gases or combustion gases.  
At formation of toxic gases:  
Put on breathing apparatus.

## SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Wear protective clothing.
- **6.2 Environmental precautions:**  
Inform respective authorities in case product reaches water or sewage system.  
Do not allow to enter drainage system, surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Dispose of contaminated material as waste according to item 13.
- **6.4 Reference to other sections**  
See Section 8 for information on personal protection equipment.  
See Section 13 for information on disposal.

## SECTION 7: Handling and storage

- **7.1 Precautions for safe handling** Wear protective clothing.
- **Information about protection against explosions and fires:** The product is not flammable
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and containers:**  
Store only in the original container.  
Keep container tightly sealed.
- **Information about storage in one common storage facility:**  
Keep away from foodstuffs, beverages and food.
- **Further information about storage conditions:** Store in a cool place.
- **Recommended storage temperature:** 5-25 °C
- **Storage class**  
LGK 12  
(German Technical Rule for Hazardous Substance – TRGS 510)
- **7.3 Specific end use(s)** No further relevant information available.

## SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see section 7.
- **8.1 Control parameters**
- **Components with limit values that require monitoring at the workplace:**
- **Additional information:** The lists that were valid during the compilation were used as basis.
- **8.2 Exposure controls**
- **Personal protective equipment**
- **General protective and hygienic measures**  
The usual precautionary measures should be adhered to general rules for handling chemicals.

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Keep away from foodstuffs, beverages and food.  
Take off immediately all contaminated clothing.  
Wash contaminated clothing before reuse.  
Wash hands during breaks and at the end of the work.  
Avoid contact with the eyes and skin.  
Do not eat, drink or smoke while working.

• **Breathing equipment:** Filter E

• **Protection of hands:**

Protective gloves.

The protective gloves to be used must comply with the specifications of the EC directive 89/686/EEC and the resultant standard EN 374.

This recommendation applies only to the product stated in the Safety Data Sheet and supplied by us as well as to the purpose specified by us.

Only use chemical-protective gloves with CE-labelling of category III.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

• **Material of gloves**

	Thickness (mm)	Breakthrough time (min)
Nitril rubber	0,38	> 480
Neoprene	0,65	> 240
Butyl rubber	0,36	> 480

Avoid natural rubber gloves.

• **As protection from splashes gloves made of the following materials are suitable:**

Synthetic gloves

Value for permeation: Level:

≥ 3 (60 min)

• **Not suitable are gloves made of the following materials:** Natural rubber, NR

• **Eye protection:** Safety glasses

## SECTION 9: Physical and chemical properties

• **9.1 Information on basic physical and chemical properties**

• **General Information**

• **Appearance:**

**Form:**

Fluid

**Colour:**

Light yellow

Clear

• **Odour:**

Pungent

like sulphur dioxide (SO<sub>2</sub>)

• **Odour threshold:**

Not determined.

• **pH-value at 20 °C:**

2.9

• **Change in condition**

**Melting point/Melting range:**

Not determined

**Boiling point/Boiling range:**

> 100 °C

• **Flash point:**

Not applicable

• **Inflammability (solid, gaseous)**

Not applicable.

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#### · Ignition temperature:

**Decomposition temperature:** Not determined.

· **Self-inflammability:** Product is not selfigniting.

· **Danger of explosion:** Product is not explosive.

#### · Critical values for explosion:

**Lower:** Not determined.

**Upper:** Not determined.

· **Vapour pressure at 20 °C:** 23 hPa

· **Density at 20 °C** 1.045 g/cm<sup>3</sup>

· **Relative density** Not determined.

· **Vapour density** Not determined.

· **Evaporation rate** Not determined.

#### · Solubility in / Miscibility with

**Water:** miscible

· **Partition coefficient (n-octanol/water):** Not determined.

#### · Viscosity:

**dynamic:** Not determined

**kinematic:** Not determined

#### · Solvent content:

**Organic solvents:** 0.0 %

· **9.2 Other information** No further relevant information available.

## SECTION 10: Stability and reactivity

### · 10.1 Reactivity

### · 10.2 Chemical stability

### · Thermal decomposition / conditions to be avoided:

To avoid thermal decomposition do not overheat.

No decomposition if used according to specifications.

### · 10.3 Possibility of hazardous reactions

Reacts with strong acids and alkali

### · 10.4 Conditions to avoid

No further relevant information available.

### · 10.5 Incompatible materials:

No further relevant information available.

### · 10.6 Hazardous decomposition products:

No dangerous decomposition products known

## SECTION 11: Toxicological information

### · 11.1 Information on toxicological effects

### · Acute toxicity:

### · LD/LC50 values that are relevant for classification:

**25646-77-9 4-(N-ethyl-N-2-hydroxyethyl)-2-methylphenylenediamine sulphate**

Oral LD50 45 mg/kg (rat)

### · Primary irritant effect:

· **on the skin:** No irritant effect.

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- **on the eye:** No irritant effect.
- **Sensitisation:** Sensitization possible by skin contact.
- **Additional toxicological information:**  
The product shows the following dangers according to the calculation method of the General EC Classification Guidelines for Preparations as issued in the latest version:  
Harmful  
Irritant  
Dangerous for the environment.  
This statement was deduced from the properties of the single components.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**  
No known symptoms to date.

## SECTION 12: Ecological information

### • 12.1 Toxicity

#### • Aquatic toxicity:

**25646-77-9 4-(N-ethyl-N-2-hydroxyethyl)-2-methylphenylenediamine sulphate**

LC50/96 h	0.75 mg/l (Daphnia magna)
	0.5-1.0 mg/l (Pimephales promelas)

- **12.2 Persistence and degradability** Not determined
- **12.3 Bioaccumulative potential** Not determined
- **Behaviour in environmental systems:** Not determined
- **12.4 Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:** No further relevant information available.
- **Remark:** Toxic for fish
- **Behaviour in sewage processing plants:** Not determined
- **Additional ecological information:**
- **General notes:**  
This statement was deduced from the properties of the single components.  
Water hazard class 3 (German Regulation) (Self-assessment): highly water-endangering.  
Do not allow product to reach ground water, water bodies or sewage system, even in small quantities.  
Also poisonous for fish and plankton in water bodies.  
At present there are no ecotoxicological assessments.  
Toxic for aquatic organisms
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

## SECTION 13: Disposal considerations

### • 13.1 Waste treatment methods

#### • Recommendation

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.  
Must be specially treated under adherence to official regulations.

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Small amounts may be diluted with plenty of water and washed away. Dispose of bigger amounts in accordance with Local Authority requirements.

**European waste catalogue**

09 01 01\* water-based developer and activator solutions

**Uncleaned packagings:**
**Recommendation:**

Non contaminated packagings can be used for recycling.

Empty contaminated packagings thoroughly. They can be recycled after thorough and proper cleaning.

**Recommended cleaning agent:** Water, if necessary with cleaning agent.

## SECTION 14: Transport information

**14.1 UN-Number**
**ADR, IMDG, IATA**

UN 3082

**14.2 UN proper shipping name**
**ADR, IATA**

ENVIRONMENTALLY HAZARDOUS  
SUBSTANCE, LIQUID, N.O.S. (4-(N-ethyl-N-2-hydroxyethyl)-2-methylphenylenediamine sulphate)

ENVIRONMENTALLY HAZARDOUS  
SUBSTANCE, LIQUID, N.O.S. (4-(N-ethyl-N-2-hydroxyethyl)-2-methylphenylenediamine sulphate),  
MARINE POLLUTANT

**IMDG**
**14.3 Transport hazard class(es)**
**ADR**

**Class**

9 (M6) Miscellaneous dangerous substances and articles.

**IMDG, IATA**

**Class**

9 Miscellaneous dangerous substances and articles.

**14.4 Packing group**
**ADR, IMDG, IATA**

III

**14.5 Environmental hazards:**

Product contains environmentally hazardous substances: 4-(N-ethyl-N-2-hydroxyethyl)-2-methylphenylenediamine sulphate

**Marine pollutant:**

Symbol (fish and tree)

**Special marking (ADR):**

Symbol (fish and tree)

**Special marking (IATA):**

Symbol (fish and tree)

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· <b>14.6 Special precautions for user</b>	Warning: Miscellaneous dangerous substances and articles.
· <b>14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
· <b>Transport/Additional information:</b>	These substances when transported in single or combination packagings containing a net quantity per single or inner packaging of 5 l or less for liquids or having a net mass of 5 kg or less for solids, are not subject to any other provisions of these Regulations provided the packagings meet the general. See the following notes.
· <b>ADR</b>	Goods are not subject to the provisions in accordance with the special provision 375 ADR.
· <b>IMDG</b>	Goods are not subject to the provisions in accordance with 2.10.2.7 IMDG-Code.
· <b>IATA</b>	Goods are not subject to the provisions in accordance with the special provision 197 IATA-DGR.
· <b>Remarks:</b>	PAX/CAO 964
· <b>UN "Model Regulation":</b>	UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (4-(N-ethyl-N-2-hydroxyethyl)-2-methylphenylenediamine sulphate), 9, III

## SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

- **National regulations**

Class	Share in %
I	9.1

- **Water hazard class:** Water danger class 3 (Self-assessment): highly water-endangering.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## SECTION 16: Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant phrases**

H301 Toxic if swallowed.  
H317 May cause an allergic skin reaction.  
H373 May cause damage to organs through prolonged or repeated exposure.  
H400 Very toxic to aquatic life.  
H410 Very toxic to aquatic life with long lasting effects.

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R25 Toxic if swallowed.  
R43 May cause sensitisation by skin contact.  
R48/22 Harmful: danger of serious damage to health by prolonged exposure if swallowed.  
R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

• **Department issuing data specification sheet:**

Laboratory

Tel.: +49 (0)39291 425-15

• **Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organisation

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Acute Tox. 3: Acute toxicity, Hazard Category 3

Acute Tox. 4: Acute toxicity, Hazard Category 4

Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2

Aquatic Acute 1: Hazardous to the aquatic environment - Acute Hazard, Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment - Chronic Hazard, Category 1

Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2

• **Sources**

Internal physical tests, MSDS of the ingredients,

Information system on hazardous substances of the German Social Accident Insurance

(GESTIS-database on hazardous substances), <http://www.dguv.de/ifa/en/gestis/stoffdb/index.jsp>

applicable EEC directives:

- 1999/45

- 1907/2006

- 1272/2008

• **\* Data compared to the previous version altered.**

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### SECTION 1: Identification of the substance/mixture and of the company/undertaking

- **1.1 Product identifier**
- **Trade name: C-41 KIT BX-A**

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- **Article number:** 13025 13026, 13027
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**  
To this day we do not have any information about the identified use at the moment. These data are available we will add these to the safety data sheet.
- **Application of the substance / the mixture**  
Photographic activities  
Photochemicals  
Colour film photographic processing solution  
bleach solution
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Calbe Chemie GmbH  
Stadtfeld 31  
D-39240 Calbe  
Tel.: +49 (0)39291 425-0  
Fax: +49 (0)39291 425-25  
e-mail: info@calbe-chemie.de  
www.calbe-chemie.de
- **Informing department:**  
Tel.: +49 (0)39291 42515  
E-Mail: kr@calbe-chemie.de
- **1.4 Emergency telephone number:** Tel.: 0700-24112112 (CAL)

### SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**  
 GHS05 corrosion  
Met. Corr.1      H290 May be corrosive to metals.  
Aquatic Chronic 3   H412 Harmful to aquatic life with long lasting effects.

---

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**  
R52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- **Information concerning particular hazards for human and environment:**  
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
- **Classification system:**  
The classification is in line with current EC lists. It is expanded, however, by information from technical literature and by information furnished by supplier companies.

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- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**  
The product is classified and labelled according to the CLP regulation.

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#### · Hazard pictograms



GHS05

#### · Signal word Warning

#### · Hazard statements

H290 May be corrosive to metals.

H412 Harmful to aquatic life with long lasting effects.

#### · Precautionary statements

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P103 Read label before use.

P273 Avoid release to the environment.

P390 Absorb spillage to prevent material damage.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

#### · 2.3 Other hazards

#### · Results of PBT and vPvB assessment

· **PBT:** Not applicable.







· **vPvB:** Not applicable.

## SECTION 3: Composition/information on ingredients

#### · 3.2 Mixtures

· **Description:** Mixture of the substances listed below with harmless additions.

#### · Dangerous components:

CAS: 111687-36-6 ELINCS: 400-660-3 Index number: 607-472-00-2	ammonium iron(III)trimethylenediaminetetraacetate hemihydrate  N R51/53  Aquatic Chronic 2, H411	10-15%
CAS: 110-15-6 EINECS: 203-740-4 Reg.nr.: 01-2119896114-34-xxxx	succinic acid  Xi R36  Eye Irrit. 2, H319	5.0-10%
CAS: 6484-52-2 EINECS: 229-347-8 Reg.nr.: 01-2119490981-27-0000	ammonium nitrate  O R8-9  Ox. Sol. 1, H271	2.0-5.0%

· **Additional information** For the wording of the listed risk phrases refer to section 16.

## SECTION 4: First aid measures

#### · 4.1 Description of first aid measures

##### · General information

Instantly remove any clothing soiled by the product.

Personal protection for the First Aider.

· **After skin contact** If skin irritation continues, consult a doctor.

##### · After eye contact

Rinse opened eye for several minutes under running water (at least 15 minutes).

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Remove contact lenses, if present and easy to do.  
Use eye protection.  
Call a doctor immediately.

- **After swallowing** Rinse out mouth and then drink plenty of water.
- **4.2 Most important symptoms and effects, both acute and delayed**  
No further relevant information available.
- **Information for doctor** None
- **4.3 Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

## SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents**  
CO<sub>2</sub>, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.  
Use fire fighting measures that suit the environment.
- **For safety reasons unsuitable extinguishing agents** Water with a full water jet.
- **5.2 Special hazards arising from the substance or mixture**  
Can be released in case of fire  
Nitrogen oxides (NO<sub>x</sub>)  
Carbon monoxide  
Carbon dioxide
- **5.3 Advice for firefighters**
- **Protective equipment:**  
Do not inhale explosion gases or combustion gases.  
At formation of toxic gases:  
Put on breathing apparatus.

## SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Wear protective clothing.
- **6.2 Environmental precautions:**  
Inform respective authorities in case product reaches water or sewage system.  
Do not allow to enter drainage system, surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Dispose of contaminated material as waste according to item 13.
- **6.4 Reference to other sections**  
See Section 7 for information on safe handling  
See Section 8 for information on personal protection equipment.  
See Section 13 for information on disposal.

## SECTION 7: Handling and storage

- **7.1 Precautions for safe handling** Keep containers tightly sealed.
- **Information about protection against explosions and fires:** The product is not flammable

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- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and containers:** Store only in the original container.
- **Information about storage in one common storage facility:**  
Keep away from foodstuffs, beverages and food.
- **Further information about storage conditions:** Store in a cool place.
- **Recommended storage temperature:** 5-25 °C
- **Storage class**  
LGK 12  
(German Technical Rule for Hazardous Substance – TRGS 510)
- **7.3 Specific end use(s)** No further relevant information available.

## SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see section 7.
- **8.1 Control parameters**
- **Components with limit values that require monitoring at the workplace:**  
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists that were valid during the compilation were used as basis.
- **8.2 Exposure controls**
- **Personal protective equipment**
- **General protective and hygienic measures**  
The usual precautionary measures should be adhered to general rules for handling chemicals.  
Take off immediately all contaminated clothing.  
Wash contaminated clothing before reuse.  
Wash hands during breaks and at the end of the work.  
Avoid contact with the eyes and skin.  
Do not eat, drink or smoke while working.
- **Breathing equipment:** Not required.
- **Protection of hands:**  
Protective gloves.  
The protective gloves to be used must comply with the specifications of the EC directive 89/686/EEC and the resultant standard EN 374.  
This recommendation applies only to the product stated in the Safety Data Sheet and supplied by us as well as to the purpose specified by us.  
Only use chemical-protective gloves with CE-labelling of category III.  
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- **Material of gloves**

	Thickness (mm)	Breakthrough time (min)
Nitril rubber	0,38	> 480
Neoprene	0,65	> 240
Butyl rubber	0,36	> 480

Avoid natural rubber gloves.
- **As protection from splashes gloves made of the following materials are suitable:**  
Synthetic gloves  
Value for permeation: Level:

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≥ 3 (60 min)

- **Eye protection:** Safety glasses
- **Body protection:** Light weight protective clothing

## SECTION 9: Physical and chemical properties

### · 9.1 Information on basic physical and chemical properties

#### · General Information

#### · Appearance:

Form:	Fluid
Colour:	Dark green
· Odour:	Not characteristic
· Odour threshold:	Not determined.

· pH-value at 20 °C: 3.8

#### · Change in condition

Melting point/Melting range:	Not determined
Boiling point/Boiling range:	> 100 °C

· Flash point: Not applicable

· Inflammability (solid, gaseous) Not applicable.

· Ignition temperature: 630 °C

· Decomposition temperature: Not determined.

· Self-inflammability: Product is not selfigniting.

· Danger of explosion: Product is not explosive.

#### · Critical values for explosion:

Lower:	None
Upper:	None

· Oxidising properties None

· Vapour pressure at 20 °C: 23 hPa

· Density at 20 °C 1.15 g/cm<sup>3</sup>

· Relative density Not determined.

· Vapour density Not determined.

· Evaporation rate Not determined.

#### · Solubility in / Miscibility with

Water:	miscible
--------	----------

· Partition coefficient (n-octanol/water): Not determined.

#### · Viscosity:

dynamic:	Not determined
kinematic:	Not determined

#### · Solvent content:

Organic solvents:	0.0 %
Water:	~ 70 %

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#### 9.2 Other information

No further relevant information available.

### SECTION 10: Stability and reactivity

- **10.1 Reactivity**
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known

### SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
  - **Acute toxicity:**
  - **LD/LC50 values that are relevant for classification:**
- |  |      |                    |
|--|------|--------------------|
| <b>111687-36-6 ammonium iron(III)trimethylenediaminetetraacetate hemihydrate</b> |      |                    |
| Oral   | LD50 | > 5000 mg/kg (rat) |
| <b>110-15-6 succinic acid</b>  |      |                    |
| Oral   | LD50 | 2260 mg/kg (rat)   |
| <b>6484-52-2 ammonium nitrate</b>  |      |                    |
| Oral   | LD50 | 4820 mg/kg (rat)   |

- **Specific symptoms in biological assay:** Not determined
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritant effect.
- **Sensitisation:** No sensitizing effect known.
- **Additional toxicological information:**  
This statement was deduced from the properties of the single components.

### SECTION 12: Ecological information

- **12.1 Toxicity**
  - **Aquatic toxicity:**  
No further relevant information available.
- |  |                                    |
|--|------------------------------------|
| <b>111687-36-6 ammonium iron(III)trimethylenediaminetetraacetate hemihydrate</b> |                                    |
| EC50/48 h  | > 1000 mg/l (Daphnia magna)        |
| LC50/96 h  | > 1000 mg/l (Onchrohynchus mykiss) |
| <b>110-15-6 succinic acid</b>  |                                    |
| EC50/48 h  | 374 mg/l (Daphnia magna)           |
- **12.2 Persistence and degradability** Not determined

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- **12.3 Bioaccumulative potential** Not determined
- **Behaviour in environmental systems:** Not determined
- **12.4 Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**  
No further relevant information available.  
Not determined
- **Remark:** Harmful to fish
- **Behaviour in sewage processing plants:** Not determined
- **Additional ecological information:**
- **General notes:**  
Water hazard class 2 (German Regulation) (Self-assessment): Water-endangering.  
At present there are no ecotoxicological assessments.  
This statement was deduced from the properties of the single components.  
Harmful to aquatic organisms
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

### SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
  - **Recommendation**  
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.  
Must be specially treated under adherence to official regulations.
  - **European waste catalogue**
- |           |   |
|-----------|---|
| 09 01 05* | bleach solutions and bleach fixer solutions |
|-----------|---|
- **Uncleaned packagings:**
  - **Recommendation:**  
Non contaminated packagings can be used for recycling.  
Empty contaminated packagings thoroughly. They can be recycled after thorough and proper cleaning.
  - **Recommended cleaning agent:** Water, if necessary with cleaning agent.

### SECTION 14: Transport information

- |                          |         |
|--------------------------|---------|
| • <b>14.1 UN-Number</b>  |         |
| • <b>ADR, IMDG, IATA</b> | UN 3265 |
- |                                       |  |
|---------------------------------------|--|
| • <b>14.2 UN proper shipping name</b> |  |
| • <b>ADR, IMDG, IATA</b>              | CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.<br>(ammonium iron(III)<br>trimethylenediaminetetraacetate hemihydrate) |

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· **14.3 Transport hazard class(es)**

· ADR, IMDG, IATA



· **Class** 8 Corrosive substances.  
· **Label** 8

· **14.4 Packing group**

· ADR, IMDG, IATA III

· **14.5 Environmental hazards:**

· **Marine pollutant:** No

· **14.6 Special precautions for user**

· **Warning:** Corrosive substances.  
· **Kemler Number:** 80  
· **EMS Number:** F-A,S-B  
· **Segregation groups** Acids

· **14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

Not applicable.

· **Transport/Additional information:**

· **ADR**

· **Limited quantities (LQ)** 5 l  
· **Transport category** 3  
· **Tunnel restriction code** E  
· **Remarks:** "Limited quantity" according to chapter 3.4 ADR

· **IMDG**

· **Limited quantities (LQ)** 5 l  
· **Remarks:** "Limited quantity" according to chapter 3.4 IMDG

· **IATA**

· **Remarks:** Packing Instruction  
PAX 852, CAO 856

· **UN "Model Regulation":**

UN3265, CORROSIVE LIQUID, ACIDIC,  
ORGANIC, N.O.S. (ammonium iron(III)  
trimethylenediaminetetraacetate hemihydrate), 8, III

**SECTION 15: Regulatory information**

· **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **National regulations**

· **Information about limitation of use:** None

· **Water hazard class:** Water hazard class 2 (Self-assessment): water-endangering.

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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### SECTION 16: Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

#### • Relevant phrases

H271 May cause fire or explosion; strong oxidiser.

H319 Causes serious eye irritation.

H411 Toxic to aquatic life with long lasting effects.

R36 Irritating to eyes.

R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R8 Contact with combustible material may cause fire.

R9 Explosive when mixed with combustible material.

#### • Department issuing data specification sheet:

Laboratory

Tel.: +49 (0)39291 425-15

#### • Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organisation

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Ox. Sol. 1: Oxidising Solids, Hazard Category 1

Met. Corr.1: Corrosive to metals, Hazard Category 1

Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2

Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2

Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3

#### • Sources

applicable EEC directives:

- 1999/45

- 1907/2006

- 1272/2008

Internal physical tests, MSDS of the ingredients,

Information system on hazardous substances of the German Social Accident Insurance

(GESTIS-database on hazardous substances), <http://www.dguv.de/ifa/en/gestis/stoffdb/index.jsp>

#### • \* Data compared to the previous version altered.

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking**

- **1.1 Product identifier**
- **Trade name: C-41 KIT BX-B**
- **Article number:** 13025, 13026, 13027
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the substance / the mixture**  
Photographic activities  
Consumer use  
Photochemicals  
Photographic fixer
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Calbe Chemie GmbH  
Stadtfeld 31  
D-39240 Calbe  
Tel.: +49 (0)39291 425-0  
Fax: +49 (0)39291 425-25  
e-mail: info@calbe-chemie.de  
www.calbe-chemie.de
- **Informing department:**  
Tel.: +49 (0)39291 42515  
E-Mail: kr@calbe-chemie.de
- **1.4 Emergency telephone number:** Tel.: 0700-24112112 (CAL)

**SECTION 2: Hazards identification**

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**  
The product is not classified according to the CLP regulation.
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC** Void
- **Information concerning particular hazards for human and environment:**  
No hazards to be particularly mentioned. Please note the information of this Material Safety Data Sheet.
- **Classification system:**  
The classification is in line with current EC lists. It is expanded, however, by information from technical literature and by information furnished by supplier companies.
- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008** Void
- **Hazard pictograms** Void
- **Signal word** Void
- **Hazard statements** Void
- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

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**SECTION 3: Composition/information on ingredients**

- **3.2 Mixtures**
- **Description:** Mixture of the substances listed below with harmless additions.
- **Dangerous components:** Void

**SECTION 4: First aid measures**

- **4.1 Description of first aid measures**
- **General information** Instantly remove any clothing soiled by the product.
- **After inhalation** Supply fresh air.
- **After skin contact**  
Instantly wash with water and soap and rinse thoroughly.  
The product is not skin irritating.
- **After eye contact**  
Rinse opened eye for several minutes under running water (> 15 min). Then consult doctor.
- **After swallowing** Rinse out mouth and then drink plenty of water.
- **4.2 Most important symptoms and effects, both acute and delayed**  
No further relevant information available.
- **Information for doctor** None
- **4.3 Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

**SECTION 5: Firefighting measures**

- **5.1 Extinguishing media**
- **Suitable extinguishing agents** Use fire fighting measures that suit the environment.
- **For safety reasons unsuitable extinguishing agents** None
- **5.2 Special hazards arising from the substance or mixture**  
Can be released in case of fire  
sulphur dioxide (SO<sub>2</sub>)  
Nitrogen oxides (NO<sub>x</sub>)
- **5.3 Advice for firefighters**
- **Protective equipment:** No special measures required.
- **Additional information** The product is not flammable

**SECTION 6: Accidental release measures**

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Wear protective clothing.
- **6.2 Environmental precautions:** Do not allow to enter drainage system, surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **6.4 Reference to other sections**  
See Section 13 for information on disposal.

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**Trade name: C-41 KIT BX-B**

No dangerous materials are released.

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## SECTION 7: Handling and storage

- **7.1 Precautions for safe handling** No special measures required.
- **Information about protection against explosions and fires:** The product is not flammable
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and containers:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Store in a cool place.
- **Recommended storage temperature:** 5-25 °C
- **Storage class** LGK 12
- **7.3 Specific end use(s)** No further relevant information available.

## SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see section 7.
- **8.1 Control parameters**
- **Components with limit values that require monitoring at the workplace:**
- **Additional information:** The lists that were valid during the compilation were used as basis.
- **8.2 Exposure controls**
- **Personal protective equipment**
- **General protective and hygienic measures**  
The usual precautionary measures should be adhered to general rules for handling chemicals.
- **Breathing equipment:** Not necessary if room is well-ventilated.
- **Protection of hands:**  
Protective gloves.  
The protective gloves to be used must comply with the specifications of the EC directive 89/686/EEC and the resultant standard EN 374.  
This recommendation applies only to the product stated in the Safety Data Sheet and supplied by us as well as to the purpose specified by us.  
Only use chemical-protective gloves with CE-labelling of category III.  
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- **Material of gloves** Synthetic gloves
- **As protection from splashes gloves made of the following materials are suitable:**  
Synthetic gloves  
Value for permeation: Level:  
≥ 3 (60 min)
- **Not suitable are gloves made of the following materials:** Natural rubber, NR
- **Eye protection:** Safety glasses
- **Body protection:** Light weight protective clothing

GB

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**Safety data sheet**  
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Trade name: C-41 KIT BX-B

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## SECTION 9: Physical and chemical properties

### · 9.1 Information on basic physical and chemical properties

#### · General Information

#### · Appearance:

Form:	Fluid
Colour:	Colourless
	Clear

· Odour:	Ammonia-like
----------	--------------

· pH-value at 25 °C:	7.3
----------------------	-----

#### · Change in condition

Melting point/Melting range: Not determined

Boiling point/Boiling range: &gt; 100 °C

· Flash point:	Not applicable
----------------	----------------

· Self-inflammability:	Product is not selfigniting.
------------------------	------------------------------

· Danger of explosion:	Product is not explosive.
------------------------	---------------------------

#### · Critical values for explosion:

Oxidising properties	None
----------------------	------

· Vapour pressure at 20 °C:	23 hPa
-----------------------------	--------

· Density at 20 °C	1.36 g/cm <sup>3</sup>
--------------------	------------------------

#### · Solubility in / Miscibility with

Water:	miscible
--------	----------

#### · Viscosity:

dynamic: Not determined

kinematic: Not determined

#### · Solvent content:

Water:	40.5 %
--------	--------

Solids content:	59.1 %
-----------------	--------

#### · 9.2 Other information

No further relevant information available.

## SECTION 10: Stability and reactivity

### · 10.1 Reactivity

### · 10.2 Chemical stability

#### · Thermal decomposition / conditions to be avoided:

No decomposition if used according to specifications.

### · 10.3 Possibility of hazardous reactions

Reacts with acids releasing sulphur dioxide

Reacts with alkalis releasing ammonia

### · 10.4 Conditions to avoid

No further relevant information available.

### · 10.5 Incompatible materials:

No further relevant information available.

### · 10.6 Hazardous decomposition products:

No dangerous decomposition products known

GB

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### SECTION 11: Toxicological information

#### 11.1 Information on toxicological effects

##### Acute toxicity:

##### Primary irritant effect:

on the skin: No irritant effect.

on the eye: No irritant effect.

Sensitisation: No sensitizing effect known.

##### Additional toxicological information:

This statement was deduced from the properties of the single components.

The material is not subject to classification according to EC lists in the last version.

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

### SECTION 12: Ecological information

#### 12.1 Toxicity

Aquatic toxicity: Not determined

12.2 Persistence and degradability Not determined

12.3 Bioaccumulative potential Not determined

Behaviour in environmental systems: Not determined

12.4 Mobility in soil No further relevant information available.

Ecotoxicological effects: Not determined

Behaviour in sewage processing plants: Not determined

##### Additional ecological information:

##### General notes:

At present there are no ecotoxicological assessments.

Water hazard class 1 (German Regulation) (Self-assessment): Weakly water-endangering.

Do not allow product to reach ground water, water bodies or sewage system.

According to the criteria of the EU-classification and labelling "dangerous for environment"(1999/45/EG) the substance/ the product has to be classified as non-hazardous for the environment.

The product does not contain organically bounded halogens (AOX-free).

##### 12.5 Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

12.6 Other adverse effects No further relevant information available.

### SECTION 13: Disposal considerations

#### 13.1 Waste treatment methods

##### Recommendation

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Must be specially treated under adherence to official regulations.

##### European waste catalogue

09 01 04*	fixer solutions
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## Safety data sheet

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**Trade name: C-41 KIT BX-B**

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- **Uncleaned packagings:**
- **Recommendation:**  
Non contaminated packagings can be used for recycling.  
Empty contaminated packagings thoroughly. They can be recycled after thorough and proper cleaning.

#### SECTION 14: Transport information

- |   |  |
|---|--|
| · <b>14.1 UN-Number</b>   |  |
| · <b>ADR, ADN, IMDG, IATA</b>   | Void   |
| · <b>14.2 UN proper shipping name</b>   |  |
| · <b>ADR</b>  | Void   |
| · <b>ADN, IMDG, IATA</b>  | Void   |
| · <b>14.3 Transport hazard class(es)</b>  |  |
| · <b>ADR, ADN, IMDG, IATA</b>   |  |
| · <b>Class</b>  | Void   |
| · <b>14.4 Packing group</b>   |  |
| · <b>ADR, IMDG, IATA</b>  | Void   |
| · <b>14.5 Environmental hazards:</b>  | Not applicable.                                      |
| · <b>14.6 Special precautions for user</b>  | Not applicable.                                      |
| · <b>14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b> | Not applicable.                                      |
| · <b>Transport/Additional information:</b>  | Not dangerous according to the above specifications. |
| · <b>UN "Model Regulation":</b>   | -  |

#### SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **National regulations**

Class	Share in %
II	0.4
- **Water hazard class:** Water hazard class 1 (Self-assessment): weakly water-endangering.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

#### SECTION 16: Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing data specification sheet:**  
Laboratory  
Tel.: +49 (0)39291 425-15

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**Safety data sheet**  
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• **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)  
IMDG: International Maritime Code for Dangerous Goods  
IATA: International Air Transport Association  
GHS: Globally Harmonised System of Classification and Labelling of Chemicals  
EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINCS: European List of Notified Chemical Substances  
CAS: Chemical Abstracts Service (division of the American Chemical Society)

• **Sources**

applicable EEC directives:  
Internal physical tests, MSDS of the ingredients,  
Information system on hazardous substances of the German Social Accident Insurance  
(GESTIS-database on hazardous substances), <http://www.dguv.de/ifa/en/gestis/stoffdb/index.jsp>

• **\* Data compared to the previous version altered.**

— GB —

**Safety data sheet**  
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Version 2

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier****Trade name: C-41 KIT SB****Article number:** 13025, 13026, 13027**1.2 Relevant identified uses of the substance or mixture and uses advised against**

To this day we do not have any information about the identified use at the moment. These data are available we will add these to the safety data sheet.

**Application of the substance / the mixture**

Photographic activities

Photochemicals

photographic processing chemical

Colour film photographic processing solution

**1.3 Details of the supplier of the safety data sheet****Manufacturer/Supplier:**

Calbe Chemie GmbH

Stadtfeld 31

D-39240 Calbe

Tel.: +49 (0)39291 425-0

Fax: +49 (0)39291 425-25

e-mail: info@calbe-chemie.de

www.calbe-chemie.de

**Informing department:**

Tel.: +49 (0)39291 42515

E-Mail: kr@calbe-chemie.de

**1.4 Emergency telephone number:** Tel.: 0700-24112112 (CAL)**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture****Classification according to Regulation (EC) No 1272/2008**

The product is not classified according to the CLP regulation.

**Classification according to Directive 67/548/EEC or Directive 1999/45/EC Void****Information concerning particular hazards for human and environment:**

The product does not have to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

No hazards to be particularly mentioned. Please note the information of this Material Safety Data Sheet.

**Classification system:**

The classification is in line with current EC lists. It is expanded, however, by information from technical literature and by information furnished by supplier companies.

**2.2 Label elements****Labelling according to Regulation (EC) No 1272/2008 Void****Hazard pictograms** Void**Signal word** Void**Hazard statements** Void**2.3 Other hazards****Results of PBT and vPvB assessment****PBT:** Not applicable.**vPvB:** Not applicable.

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**Trade name: C-41 KIT SB**










(Contd. of page 1)

### SECTION 3: Composition/information on ingredients

#### 3.2 Mixtures

**Description:** Mixture of the substances listed below with harmless additions.

#### Dangerous components:

	??	< 0.5%
	 Flam. Liq. 1, H224	
CAS: 55965-84-9 Index number: 613-167-00-5	a mixture of: 5-chloro-2-methyl-2 H -isothiazol-3-one [EC No 247-500-7] and 2-methyl-2 H -isothiazol-3-one [EC No 220-239-6] (3:1)  T R23/24/25  C R34  Xi R43  N R50/53  Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331  Skin Corr. 1B, H314  Aquatic Acute 1, H400; Aquatic Chronic 1, H410  Skin Sens. 1, H317	< 0.5%

**Additional information** For the wording of the listed risk phrases refer to section 16.

### SECTION 4: First aid measures

#### 4.1 Description of first aid measures

**General information** Instantly remove any clothing soiled by the product.

**After inhalation** No special measures required.

**After skin contact** Instantly wash with water and soap and rinse thoroughly.

#### After eye contact

Rinse opened eye for several minutes under running water (> 15 min). Then consult doctor.

**After swallowing** Rinse out mouth and then drink plenty of water.

#### 4.2 Most important symptoms and effects, both acute and delayed

No further relevant information available.

**Information for doctor** None

#### 4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

### SECTION 5: Firefighting measures

#### 5.1 Extinguishing media

##### Suitable extinguishing agents

CO<sub>2</sub>, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam. Use fire fighting measures that suit the environment.

**For safety reasons unsuitable extinguishing agents** Water with a full water jet.

#### 5.2 Special hazards arising from the substance or mixture

Can be released in case of fire

Carbon monoxide

Nitrogen oxides (NO<sub>x</sub>)

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**Safety data sheet**  
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**Trade name: C-41 KIT SB**

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- **5.3 Advice for firefighters**
- **Protective equipment:** Do not inhale explosion gases or combustion gases.
- **Additional information** The product is not flammable

## SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures** Not required.
- **6.2 Environmental precautions:** No special measures required.
- **6.3 Methods and material for containment and cleaning up:** No special measures required.
- **6.4 Reference to other sections**  
See Section 8 for information on personal protection equipment.

## SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**  
The lists that were valid during the compilation were used as basis.
- **Information about protection against explosions and fires:**  
No special measures required.  
The product is not flammable
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and containers:** No special requirements.
- **Information about storage in one common storage facility:**  
Keep away from foodstuffs, beverages and food.
- **Further information about storage conditions:**  
Keep container tightly sealed.  
Store in a cool place.
- **Recommended storage temperature:** 5-25 °C
- **Storage class** LGK 12
- **7.3 Specific end use(s)** No further relevant information available.

## SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see section 7.
- **8.1 Control parameters**
- **Components with limit values that require monitoring at the workplace:**
- **Additional information:** The lists that were valid during the compilation were used as basis.
- **8.2 Exposure controls**
- **Personal protective equipment**
- **General protective and hygienic measures**  
The usual precautionary measures should be adhered to general rules for handling chemicals.  
Keep away from foodstuffs, beverages and food.  
Do not eat, drink or smoke while working.  
Take off immediately all contaminated clothing.  
Wash hands during breaks and at the end of the work.  
Avoid contact with the eyes and skin.
- **Breathing equipment:** Not required.

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**Trade name: C-41 KIT SB**

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- **Protection of hands:** Not required.
- **Eye protection:** Not required.
- **Body protection:** Not required.

## SECTION 9: Physical and chemical properties

### · 9.1 Information on basic physical and chemical properties

#### · General Information

##### · Appearance:

<b>Form:</b>	Fluid
<b>Colour:</b>	Colourless
<b>Odour:</b>	Not characteristic

· **pH-value:** 6-7

#### · Change in condition

<b>Melting point/Melting range:</b>	Not determined
<b>Boiling point/Boiling range:</b>	100 °C

· **Flash point:** Not applicable

· **Ignition temperature:** Not determined

· **Self-inflammability:** Product is not selfigniting.

· **Danger of explosion:** Product is not explosive.

· **Vapour pressure at 20 °C:** 23 hPa

· **Density at 20 °C** ~ 1.00 g/cm<sup>3</sup>

#### · Solubility in / Miscibility with

**Water:** miscible

#### · Viscosity:

<b>dynamic:</b>	Not determined
<b>kinematic:</b>	Not determined

#### · Solvent content:

**Organic solvents:** 0.0 %

· **9.2 Other information** No further relevant information available.

## SECTION 10: Stability and reactivity

### · 10.1 Reactivity

### · 10.2 Chemical stability

#### · Thermal decomposition / conditions to be avoided:

No decomposition if used according to specifications.

#### · 10.3 Possibility of hazardous reactions

No dangerous reactions known

#### · 10.4 Conditions to avoid

No further relevant information available.

#### · 10.5 Incompatible materials:

No further relevant information available.

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**Trade name: C-41 KIT SB**

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- **10.6 Hazardous decomposition products:** No dangerous decomposition products known

## SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritant effect.
- **Additional toxicological information:**  
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

## SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** Not determined
- **12.2 Persistence and degradability** Not determined
- **12.3 Bioaccumulative potential** Not determined
- **Behaviour in environmental systems:** Not determined
- **12.4 Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:** Not determined
- **Behaviour in sewage processing plants:** Not determined
- **Additional ecological information:**
- **General notes:**  
At present there are no ecotoxicological assessments.  
The product does not contain organically bounded halogens (AOX-free).  
Water hazard class 1 (German Regulation) (Self-assessment): Weakly water-endangering.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

## SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
  - **Recommendation**  
Small amounts may be diluted with plenty of water and washed away. Dispose of bigger amounts in accordance with Local Authority requirements.
  - **European waste catalogue**
- |          |                                |
|----------|--------------------------------|
| 09 01 99 | wastes not otherwise specified |
|----------|--------------------------------|
- **Uncleaned packagings:**
  - **Recommendation:**  
Non contaminated packagings can be used for recycling.

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**Safety data sheet**  
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**Trade name: C-41 KIT SB**

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Empty contaminated packagings thoroughly. They can be recycled after thorough and proper cleaning.

- **Recommended cleaning agent:** Water, if necessary with cleaning agent.

#### SECTION 14: Transport information

- |   |  |
|---|--|
| • <b>14.1 UN-Number</b>   |  |
| • <b>ADR, ADN, IMDG, IATA</b>   | Void   |
| • <b>14.2 UN proper shipping name</b>   |  |
| • <b>ADR</b>  | Void   |
| • <b>ADN, IMDG, IATA</b>  | Void   |
| • <b>14.3 Transport hazard class(es)</b>  |  |
| • <b>ADR, ADN, IMDG, IATA</b>   |  |
| • <b>Class</b>  | Void   |
| • <b>14.4 Packing group</b>   |  |
| • <b>ADR, IMDG, IATA</b>  | Void   |
| • <b>14.5 Environmental hazards:</b>  | Not applicable.                                      |
| • <b>14.6 Special precautions for user</b>  | Not applicable.                                      |
| • <b>14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b> | Not applicable.                                      |
| • <b>Transport/Additional information:</b>  | Not dangerous according to the above specifications. |
| • <b>UN "Model Regulation":</b>   | -  |

#### SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **National regulations**
- **Water hazard class:** Water hazard class 1 (Self-assessment): weakly water-endangering.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

#### SECTION 16: Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant phrases**
- H224 Extremely flammable liquid and vapour.
- H301 Toxic if swallowed.
- H311 Toxic in contact with skin.
- H314 Causes severe skin burns and eye damage.
- H317 May cause an allergic skin reaction.
- H331 Toxic if inhaled.
- H400 Very toxic to aquatic life.

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## Safety data sheet

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H410 Very toxic to aquatic life with long lasting effects.

R23/24/25 Toxic by inhalation, in contact with skin and if swallowed.

R34 Causes burns.

R43 May cause sensitisation by skin contact.

R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

• **Department issuing data specification sheet:**

Laboratory

Tel.: +49 (0)39291 425-15

• **Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organisation

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

Flam. Liq. 1: Flammable liquids, Hazard Category 1

Acute Tox. 3: Acute toxicity, Hazard Category 3

Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B

Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

Aquatic Acute 1: Hazardous to the aquatic environment - AcuteHazard, Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment - Chronic Hazard, Category 1

• **Sources**

applicable EEC directives:

- 1999/45

- 1907/2006

- 1272/2008

Internal physical tests, MSDS of the ingredients,

Information system on hazardous substances of the German Social Accident Insurance

(GESTIS-database on hazardous substances), <http://www.dguv.de/ifa/en/gestis/stoffdb/index.jsp>

# MATERIAL SAFETY DATA SHEET

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME.....: KAMI Scanner Mounting Fluid  
PRODUCT CODE.....: SMF 2001  
CHEMICAL FAMILY.....: Solvent mixture

### MANUFACTURER

=KAMI= CHEM.-TECHN.-SPEZIALERZEUGNISSE  
Hochstraße 1 / Linden  
D-91495 Markt Erlbach  
Germany  
Tel.: 0049 9106-410  
Fax: 0049 9106-6293



13765-F ALTON PARKWAY  
IRVINE, CA 92618  
(800) 472-7455

USA

Phone: (949) 770-8787  
(800) 472-7455  
Fax: (949) 770-4986

EMERGENCY Ph.-No.:  
CHEM-TREK 001-800 424 9300

## 2. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Component</u>	<u>CAS#</u>	<u>%</u>	<u>Exposure Limit</u>
Mineral Spirits	31807-55-3 13475-82-6	< 10	See Effects of Overexposure
Solvent Naphtha	64742-49-0	< 90	100 ppm TWA (Recommended for Stoddard solvent) See Effects of Overexposure
n-Hexane	110-54-3	< 4	See Effects of Overexposure

### **3. HAZARD IDENTIFICATION**

#### **POTENTIAL HEALTH EFFECTS:**

ROUTE(S) OF ENTRY.....: Skin and eye contact with liquids, vapor and inhalation.

#### **HUMAN EFFECTS AND SYMPTOMS OF OVEREXPOSURE:**

This product contains:

Solvent Naphtha, which causes irritation of skin, eye and the respiratory tract and/or acute nervous system depression characterized by the following progressive symptoms: headache, dizziness, staggering gait, confusion, unconsciousness, or coma. Repeated overexposure to solvent vapors may cause permanent brain and nervous system damage. Intentional misuse by inhaling organic solvent vapors may be harmful or fatal. Skin contact has a defatting effect and prolonged skin contact may cause sensitization.

Mineral Spirits, which is defatting to skin.

High concentrations may cause respiratory irritation and anaesthesia.

n-Hexane, which is a skin, eye and respiratory irritant and may cause dermatitis. Prolonged exposure may cause anaesthesia, nausea, dizziness and headache.

#### **CARCINOGENICITY:**

NTP.....	No
IARC.....	No
OSHA.....	No

### **4. FIRST AID MEASURES**

SKIN:	Remove contaminated clothing and shoes. Wash with soap or mild detergent and large amounts of water. Get medical attention if irritation occurs.
EYES:	Hold eyes open and flush for at least 15 minutes with large amounts of water. Seek medical attention.
INGESTION:	Do not induce vomiting. Give two glasses of water to dilute stomach contents. Never give anything by mouth to an unconscious person. Consult physician.
INHALATION:	Remove to fresh air immediately. If breathing has stopped give artificial respiration. If breathing is difficult administer oxygen. Consult physician if irritation of respiratory passage occurs.

## **5. FIRE AND EXPLOSION DATA**

FLASH POINT.....: -9°C (16°F)

FLAMMABLE LIMITS.....: UEL: 0.5 % by volume

EXTINGUISHING MEDIA.....: Dry chemical, carbon dioxide, or foam.

SPECIAL FIRE FIGHTING PROCEDURES: Use self-contained breathing apparatus and full protective clothing. Use water only to cool packages in fire area.

## **6. ACCIDENTAL RELEASE MEASURES:**

SPILL AND LEAK PROCEDURES: Remove all sources of ignition. Wearing appropriate personal protective equipment, contain spills onto inert absorbent and place in suitable containers.

## **7. HANDLING AND STORAGE**

STORAGE: Store closed containers in cool area away from all sources of ignition, away from strong oxidizing agents.

HANDLING: Static electricity may accumulate and create a fire hazard. Ground fixed equipment. Bond and ground transfer containers and equipment.

## **8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

ENGINEERING CONTROLS: Use local exhaust ventilation or respiratory protection to maintain employee exposure below TLV.

RESPIRATORY PROTECTION: If airborne concentration poses a health hazard, becomes irritating or exceeds recommended limits, use a NIOSH approved respirator in accordance with OSHA Respirator Protection requirements under 29 CFR 1910.134.

SKIN PROTECTION: Clothing suitable to prevent skin contact, and gloves.

EYE PROTECTION: Safety goggles with side shields.

## **9. PHYSICAL AND CHEMICAL PROPERTIES**

PHYSICAL FORM:	Liquid
COLOR:	Colorless
ODOR:	Alcoholic and perfume odor
BOILING POINT:	114°C
SOLUBILITY IN WATER:	Partially soluble
SPECIFIC GRAVITY:	0.74 g/cm <sup>3</sup>
VAPOR PRESSURE:	2 mbar @ 25°C

## **10. STABILITY AND REACTIVITY**

CHEMICAL STABILITY: Stable

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide and hydrocarbon byproducts.

POLYMERIZATION: Will not occur.

INCOMPATIBILITIES: Avoid sparking devices or ignition sources, and oxidizing agents.

## **11. TOXICOLOGICAL INFORMATION**

See Section 3- Human Effects of Overexposure.

## **12. ECOLOGICAL INFORMATION**

Avoid contamination of ground water or waterways.

## **13. DISPOSAL CONSIDERATIONS**

Dispose of in accordance with Federal, State or Local regulations. Do not incinerate closed containers: explosion hazard.

## **14. TRANSPORT INFORMATION** (Not meant to be all inclusive)

DOT SHIPPING NAME: Hydrocarbons, liquid, n.o.s. (Mineral spirits, solvent naphtha)

HAZARD CLASS: 3

UN#: UN 3295

LABEL: Flammable liquid

## **15. REGULATORY INFORMATION** (Not meant to be all inclusive)

All components are on the TSCA Inventory.

## 16. OTHER INFORMATION

<u>HAZARDOUS MATERIALS INFORMATION LABEL (HMIS)</u>	
<u>HAZARD CODE</u>	<u>RATING</u>
4= EXTREME	FLAMMABILITY: 3
3= HIGH	HEALTH: 2
2= MODERATE	REACTIVITY: 0
1= SLIGHT	SPECIAL: 0
0= INSIGNIFICANT	

To the best of our knowledge, the information contained in this MSDS is accurate. It is intended to assist the user in his evaluation of the product's hazards, and safety precautions to be taken in its use. The data on this MSDS relate only to the specific material designated herein. We do not assume any liability for the use of, or reliance on this information, nor do we guarantee its accuracy or completeness.

**WARNING!**

**FLAMMABLE**

**HARMFUL IF INHALED, SWALLOWED  
OR ABSORBED THROUGH SKIN**

**MAY CAUSE IRRITATION OF EYES,  
SKIN AND RESPIRATORY PASSAGES**

Product contains < 10 % Mineral Spirits Solvent and > 90 % Solvent Naphtha and n-Hexane..

VOC = 99,88 % (0,710 kg/1000 ml)

Keep away from heat and flame and ignition sources.  
Keep container closed.

Avoid breathing vapor.  
Avoid contact with eyes, skin or clothing.  
Use with adequate ventilation or respiratory protection to keep exposure below TLV Values.  
Wash thoroughly after handling.

**FIRST AID:** If swallowed, give two glasses of water. Do not induce vomiting. Call for medical help. Never give anything by mouth to an unconscious person.

If inhaled, remove to fresh air. If not breathing, give artificial respiration, preferably mouth to mouth. If breathing is difficult, give oxygen. In case of persistent irritation consult physician.

In case of contact, immediately flush eyes or skin with plenty of water. Remove contaminated clothing or shoes. Call a physician if irritation persists. Wash clothing before reuse. Destroy contaminated shoes.

**Fire fighting:** In case of fire, use foam, carbon dioxide or dry chemical. Use water spray only to cool packages in fire area

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**Kodak**

## 1. Identification of the substance/mixture and of the company/undertaking

**Product name:** KODAK Rapid Fixer, Part A

**Product code:** 5160353 - Part A

**Synonyms:** PCD 4896

**Relevant identified uses of the substance or mixture and uses advised against:**

**Identified uses:** photographic processing chemical (fixer). For industrial use only.

**Supplier:** EASTMAN KODAK COMPANY, 343 State Street, Rochester, New York 14650

For Emergency Health, Safety & Environmental Information, call (585) 722-5151 (USA)

For further information about this product, call (800) 242-2424.

## 2. Hazards identification

**Classification of the chemical in accordance with paragraph (d) of 29 CFR 1910.1200:**

Hazard class	Hazard category	Route of exposure
Eye irritation	Category 2B	--
Skin irritation	Category 2	--
Reproductive toxicity	Category 1	--
Acute aquatic toxicity	Category 3	--
Chronic aquatic toxicity	Category 3	--

### GHS-Labeling

**Contains:**

Ammonium thiosulphate (7783-18-8), Boric acid (10043-35-3), Ammonium sulphite (10196-04-0), Acetic acid (64-19-7), Sodium bisulphite (7631-90-5)

**Symbol(s):**



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**Signal word:** Danger

**Hazard statements:** Causes eye irritation. Causes skin irritation. May damage fertility or the unborn child. Harmful to aquatic life with long lasting effects.

**Precautionary statements:**

**Prevention:** Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wash hands thoroughly after handling. Avoid release to the environment. Wear protective gloves/ protective clothing/ eye protection/ face protection.

**Response:** IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/ attention. Take off contaminated clothing and wash before reuse. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/ attention. IF exposed or concerned: Get medical advice/ attention.

**Storage:** Store locked up.

**Disposal:** Dispose of contents/container in accordance with local/regional/national/international regulation.

**Other hazards which do not result in classification:**

Dried product residue can act as a reducing agent.

**HMIS III Hazard Ratings:** Health - 2\*, Flammability - 1, Physical Hazard - 0

**NFPA Hazard Ratings:** Health - 2, Flammability - 1, Instability - 0

NOTE: HMIS III and NFPA 704 (2007) hazard indexes involve data review and interpretation that may vary among companies. They are intended only for rapid, general identification of the magnitude of the potential hazards. To adequately address safe handling, ALL information in this MSDS must be considered.

## 3. Composition/information on ingredients

Weight percent	Components - (CAS-No.)
40 - 45	Ammonium thiosulphate (7783-18-8)
5 - 10	Sodium acetate (127-09-3)
1 - 5	Boric acid (10043-35-3)
1 - 5	Ammonium sulphite (10196-04-0)

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1 - 5        Acetic acid (64-19-7)  
0.1 - < 1    Sodium bisulphite (7631-90-5)

## 4. First aid measures

**Inhalation:** If symptomatic, move to fresh air. Get medical attention if symptoms persist.

**Eyes:** Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart. If easy to do, remove contact lens, if worn. If eye irritation persists: Get medical advice/ attention.

**Skin:** Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention if symptoms occur. Wash contaminated clothing before re-use. Destroy or thoroughly clean contaminated shoes.

**Ingestion:** If swallowed, DO NOT induce vomiting. Get medical attention if symptoms occur.

**Most important symptoms and effects, both acute and delayed:** No information available.

**Indication of any immediate medical attention and special treatment needed:**

**Treatment:** No information available.

## 5. Firefighting measures

**Extinguishing Media:** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Special hazards arising from the substance or mixture**

**Hazardous Combustion Products:** Carbon oxides, Sulphur oxides, Nitrogen oxides (NO<sub>x</sub>), (see also Hazardous Decomposition Products sections.)

**Special Fire-Fighting Procedures:** Wear self-contained breathing apparatus and protective clothing. Fire or excessive heat may produce hazardous decomposition products.

**Unusual Fire and Explosion Hazards:** Dried product residue can act as a reducing agent. Reacts violently with oxidizing materials. May cause spontaneous heating and ignition when absorbed on combustible, porous material (e.g. rags, paper, sawdust, cotton, clothing).

## 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures:** Refer to protective measures listed in sections 7 and 8.

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**Methods and materials for containment and cleaning up:** Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination. Prevent runoff from entering drains, sewers, or streams.

**Environmental precautions:** No information available.

## 7. Handling and storage

### Precautions for safe handling

**Personal precautions:** Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. Avoid contact with eyes, skin, and clothing. Obtain special instructions before use. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Do not handle until all safety precautions have been read and understood. Do not eat, drink or smoke when using this product.

**Prevention of Fire and Explosion:** Keep from contact with oxidizing materials, highly oxygenated or halogenated solvents, organic compounds containing reducible functional groups. Remove and wash contaminated clothing promptly.

**Ventilation:** Match ventilation rates to conditions of use so as not to exceed any applicable exposure limits (see Section 8).

**Conditions for safe storage, including any incompatibilities:** Store in a well-ventilated place. Keep cool. Store in original container. Keep container tightly closed to prevent the loss of water. Keep away from incompatible substances (see Incompatibility section.)

## 8. Exposure controls/personal protection

### Occupational exposure controls

Chemical Name	Regulatory List	Value Type	Value
Boric acid	ACGIH	Time weighted average	2 mg/m3 <i>Form of exposure: inhalable fraction</i>
Boric acid		Short term exposure limit	6 mg/m3 <i>Form of exposure: inhalable fraction</i>
Acetic acid		Time weighted average	10 ppm
		Short term exposure limit	15 ppm
	OSHA	Time weighted average	10 ppm 25 mg/m3

**Appropriate engineering controls:** Use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. Controls should be sufficient so that applicable occupational exposure limits are not exceeded.

**Individual protection measures, such as personal protective equipment**

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**Eye protection:** Wear safety glasses with side shields (or goggles).

**Hand protection:** Wear protective gloves/ protective clothing.

**Respiratory protection:** If engineering controls do not maintain airborne concentrations below recommended exposure limits, an approved respirator must be worn. Respirator type: full-face organic vapour cartridge. If respirators are used, a program should be instituted to assure compliance with applicable federal, state, commonwealth, provincial, or local laws and regulations.

## 9. Physical and chemical properties

**Physical form:** liquid

**Colour:** light yellow

**Odour:** slight sulphur, slight acetic acid

**Specific gravity:** 1.32

**Vapour pressure (at 20.0 °C (68.0 °F)):** 24 mbar (18.0 mm Hg)

**Vapour density:** 0.6

**Boiling point/boiling range:** > 100 °C (> 212.0 °F)

**Water solubility:** complete

**pH:** 5.0

**Flash point:** does not flash

**Evaporation rate:** No data available

**Flammability (Solid; gas):** No data available

**Upper explosion limit:** No data available

**Lower explosion limit:** No data available

**Partition coefficient: n-octanol/water:** No data available

**Auto-ignition temperature:** No data available

**Decomposition temperature:** No data available

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**Viscosity:** No data available

**Explosive properties:** No data available

**Oxidizing properties:** No data available

## 10. Stability and reactivity

**Reactivity:** No data available

**Chemical stability:** Stable under normal conditions.

**Possibility of hazardous reactions:** Hazardous polymerisation does not occur.

**Conditions to avoid:** No data available

**Incompatible materials:** Acids, Strong bases, sodium hypochlorite (bleach), Halogenated compounds, Oxidizing agents. Contact with sodium hypochlorite (bleach) may form chloramine (toxic gas). Contact with strong acids liberates sulphur dioxide. Contact with base liberates flammable material. Contact with base liberates ammonia.

**Hazardous decomposition products:** Ammonia, chloramine, Nitrogen oxides (NO<sub>x</sub>), Sulphur oxides

## 11. Toxicological information

### Effects of Exposure

#### General advice:

Contains: Boric acid. Based on repeated-dose ingestion studies in animals, may cause adverse reproductive and developmental effects.

Contains: Acetic acid. Acute overexposure to extremely high airborne concentrations of respiratory irritants has been associated with development of an asthma-like reactive airways syndrome (RADS) in susceptible individuals. Extremely high airborne concentrations are not generated during normal conditions of use but may occur following a spill. The potential to generate extremely high airborne concentrations in a spill situation depends upon physical factors such as the concentration of the solution, the volume of the spill, the surface area of the spill, the size of the room where the spill occurred, and the ventilation rate in the room.

**Inhalation:** Airborne dust/mist/vapor may be irritating. Some asthmatics or hypersensitive individuals may experience difficult breathing after inhaling sulfite salts.

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**Eyes:** Causes eye irritation.

**Skin:** Causes skin irritation.

**Ingestion:** May cause irritation of the gastrointestinal tract if swallowed. Some asthmatics or sulfite-sensitive individuals may experience wheezing, chest tightness, stomach upset, hives, faintness, weakness and diarrhea.

### Acute Toxicity Data:

Oral LD50 (Rat): > 2,540 mg/kg

- Dermal LD50: 20 mL/kg
- Skin irritation: moderate
- Eye irritation: slight

### Carcinogenicity

American Conference of Governmental Industrial Hygienists (ACGIH):	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
International Agency for Research on Cancer (IARC):	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
U.S. National Toxicology Program (NTP):	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
U.S. Occupational Safety and Health Administration (OSHA):	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
California Prop. 65	This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

## 12. Ecological information

The following properties are ESTIMATED from the components of the preparations.

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## Potential Toxicity:

Toxicity to fish (LC50): 10 - 100 mg/l

Toxicity to daphnia (EC50): > 100 mg/l

**Persistence and degradability:** Not readily biodegradable.

This product has not been tested for environmental effects.

## Bioaccumulative potential

No data available

## Mobility in soil

No information available.

## 13. Disposal considerations

Discharge, treatment, or disposal may be subject to federal, state, commonwealth, provincial, or local laws. Since emptied containers retain product residue, follow label warnings even after container is emptied.

## 14. Transport information

Not regulated for all modes of transportation.

For more transportation information, go to: [www.kodak.com/go/ship](http://www.kodak.com/go/ship).

## 15. Regulatory information

### Notification status

Regulatory List	Notification status
TSCA	All listed
DSL	All listed
NDSL	None listed
EINECS	All listed
ELINCS	None listed
NLP	None listed

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AICS	All listed
IECS	All listed
ENCS	All listed
ECI	All listed
NZIoC	All listed
PICCS	All listed

"Not all listed" indicates one or more component is either not on the public Inventory or is subject to exemption requirements. If additional information is needed contact Kodak.

### Other regulations

U.S. - CERCLA/SARA (40 CFR § 302.4 Designation of hazardous substances):	Ammonium sulphite , Acetic acid
U.S. - CERCLA/SARA - Section 302 (40 CFR § 355 Appendices A and B - The List of Extremely Hazardous Substances and Their Threshold Planning Quantities):	No components of this product are subject to the SARA Section 302 (40 CFR 355) reporting requirements.
U.S. - CERCLA/SARA - Section 313 (40 CFR § 372.65 Toxic Chemical Release Reporting):	Ammonium thiosulphate , Ammonium sulphite
U.S. - California - 8 CCR Section 339 - Director's List of Hazardous Substances:	Ammonium sulphite , Acetic acid
U.S. - California - 8 CCR Section 5200-5220 - Specifically Regulated Carcinogens:	No components found on the California Specifically Regulated Carcinogens List.
U.S. - California - 8 CCR Section 5203 Carcinogens:	No components found on the California Section 5203 Carcinogens List.
U.S. - California - 8 CCR Section 5209 Carcinogens:	No components found on the California Section 5209 Carcinogens List.
U.S. - Massachusetts - General Law Chapter 111F (MGL c 111F) - Hazardous Substances Disclosure by Employers (a.k.a. Right to Know Law):	Ammonium thiosulphate , Ammonium sulphite , Acetic acid
U.S. - Minnesota Employee Right-to-Know (5206.0400, Subpart 5. List of Hazardous Substances):	Acetic acid
U.S. - Pennsylvania - Part XIII. Worker and Community Right-to-Know Act (Chapter 323 Hazardous Substance List, Appendix A):	Water , Ammonium thiosulphate , Sodium acetate , Boric acid , Ammonium sulphite , Acetic acid ,

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U.S. - New Jersey - Worker and Community Right to Know Act (N.J.S.A. 34:5A-1):	Sodium bisulphite Boric acid , Ammonium sulphite , Acetic acid
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## 16. Other information

The data below reflects current legislative requirements whereas the product in your possession may carry a different version of the label depending on the date of manufacture.

### US/Canadian Label Statements:

#### KODAK Rapid Fixer, Part A

##### Contains:

Ammonium thiosulphate (7783-18-8), Boric acid (10043-35-3), Ammonium sulphite (10196-04-0), Acetic acid (64-19-7), Sodium bisulphite (7631-90-5)

##### Symbol(s):



**Signal word:** Danger

**Hazard statements:** Causes eye irritation. Causes skin irritation. May damage fertility or the unborn child. Harmful to aquatic life with long lasting effects.

### Precautionary statements:

**Prevention:** Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wash hands thoroughly after handling. Avoid release to the environment. Wear protective gloves/ protective clothing/ eye protection/ face protection.

**Response:** IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/ attention. Take off contaminated clothing and wash before reuse. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/ attention. IF exposed or concerned: Get medical advice/ attention.

**Storage:** Store locked up.

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**Disposal:** Dispose of contents/container in accordance with local/regional/national/international regulation.

**FIRST AID:** If symptomatic, move to fresh air. Get medical attention if symptoms persist. Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart. If easy to do, remove contact lens, if worn. If eye irritation persists: Get medical advice/ attention. Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention if symptoms occur. Wash contaminated clothing before re-use. Destroy or thoroughly clean contaminated shoes. If swallowed, DO NOT induce vomiting. Get medical attention if symptoms occur. Keep out of reach of children. Do not handle or use until safety precautions in Material Safety Data Sheet (MSDS) have been read and understood. Since emptied containers retain product residue, follow label warnings even after container is emptied. **IN CASE OF FIRE:** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. **IN CASE OF SPILL:** Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination. Prevent runoff from entering drains, sewers, or streams.

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The information contained herein is furnished without warranty of any kind. Users should consider these data only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use and disposal of these materials and the safety and health of employees and customers and the protection of the environment. The information relating to the working solution is for guidance purposes only, and is based on correct mixing and use of the product according to instructions.

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R-1, S-2, F-1, C-1 REPO

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**Kodak alaris**

## 1. Identification of the substance/mixture and of the company/undertaking

**Product name:** KODAK Rapid Fixer, Part B

**Product code:** 5160353 - Part B

**Synonyms:** PCD F1720

**Relevant identified uses of the substance or mixture and uses advised against:**

**Identified uses:** photographic processing chemical (fixer). For industrial use only.

**Supplier:** Kodak Alaris Inc., 2400 Mount Read Boulevard, Rochester, NY 14615

IN EMERGENCY, telephone: 1-800-424-9300 or +1 703-527-3887.

For further information about this product, email [EHS-Questions@Kodakalaris.com](mailto:EHS-Questions@Kodakalaris.com).

## 2. Hazards identification

**Classification of the chemical in accordance with paragraph (d) of 29 CFR 1910.1200:**

Hazard class	Hazard category	Route of exposure
Corrosive to metals	Category 1	--
Skin corrosion	Category 1	--
Serious eye damage	Category 1	--

### GHS-Labeling

**Contains:**

Aluminium sulphate (10043-01-3), Sulphuric acid (7664-93-9)

**Symbol(s):**



**Signal word:** Danger

**Hazard statements:** May be corrosive to metals. Causes severe skin burns and eye damage.

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## Precautionary statements:

**Prevention:** Keep only in original container. Wear protective gloves/protective clothing/eye protection/face protection. Do not breathe dust/ fume/ gas/ mist/ vapours/ spray. Wash thoroughly after handling.

**Response:** Absorb spillage to prevent material damage. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/ physician. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower. Wash contaminated clothing before reuse. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

**Storage:** Store in corrosive resistant container with resistant inliner.

**Disposal:** Dispose of contents/container in accordance with local/regional/national/international regulation.

**HMIS III Hazard Ratings:** Health - 3, Flammability - 0, Physical Hazard - 0

**NFPA Hazard Ratings:** Health - 3, Flammability - 0, Instability - 0

NOTE: HMIS III and NFPA 704 (2007) hazard indexes involve data review and interpretation that may vary among companies. They are intended only for rapid, general identification of the magnitude of the potential hazards. To adequately address safe handling, ALL information in this MSDS must be considered.

## 3. Composition/information on ingredients

Weight percent	Components - (CAS-No.)
15 - 20	Aluminium sulphate (10043-01-3)
10 - < 15	Sulphuric acid (7664-93-9)

## 4. First aid measures

**Inhalation:** IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/ physician.

**Eyes:** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician.

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**Skin:** IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower. Wash contaminated clothing before re-use.

**Ingestion:** If swallowed, DO NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a physician or poison control centre immediately.

**Most important symptoms and effects, both acute and delayed:** No information available.

**Indication of any immediate medical attention and special treatment needed:**

**Treatment:** No information available.

## 5. Firefighting measures

**Extinguishing Media:** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Special hazards arising from the substance or mixture**

**Hazardous Combustion Products:** None (noncombustible), (see also Hazardous Decomposition Products sections.)

**Special Fire-Fighting Procedures:** Wear self-contained breathing apparatus and protective clothing. Fire or excessive heat may produce hazardous decomposition products.

**Unusual Fire and Explosion Hazards:** None.

## 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures:** Refer to protective measures listed in sections 7 and 8.

**Methods and materials for containment and cleaning up:** Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination.

**Environmental precautions:** No information available.

## 7. Handling and storage

**Precautions for safe handling**

**Personal precautions:** Avoid breathing mist or vapour at concentrations greater than the exposure limits. Avoid contact with eyes, skin, and clothing. Use only with adequate ventilation. Wash thoroughly after handling. Do not eat, drink or smoke when using this product.

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**Prevention of Fire and Explosion:** No special technical protective measures required.

**Conditions for safe storage, including any incompatibilities:** Keep container tightly closed. Keep away from incompatible substances (see Incompatibility section.)

## 8. Exposure controls/personal protection

### Occupational exposure controls

Chemical Name	Regulatory List	Value Type	Value
Sulphuric acid	ACGIH	time weighted average	0.2 mg/m3
<i>Form of exposure: thoracic fraction</i>			
Sulphuric acid	OSHA	time weighted average	1 mg/m3

**Appropriate engineering controls:** Good general ventilation should be used. Ventilation should be sufficient so that applicable occupational exposure limits are not exceeded. Ventilation rates should be matched to conditions. Supplementary local exhaust ventilation, closed systems, or respiratory protection may be needed in special circumstances.

### Individual protection measures, such as personal protective equipment

**Eye protection:** Wear eye/face protection.

**Hand protection:** Wear protective gloves.

**Respiratory protection:** None should be needed. If engineering controls do not maintain airborne concentrations below recommended exposure limits, an approved respirator must be worn.

Respirator type: full-face cartridge respirator; acid gas with dust/mist prefilter. If respirators are used, a program should be instituted to assure compliance with applicable federal, state, commonwealth, provincial, or local laws and regulations.

## 9. Physical and chemical properties

**Physical form:** liquid

**Colour:** colourless

**Odour:** slight sulphur

**Specific gravity:** 1.30

**Vapour pressure (at 20.0 °C (68.0 °F)):** 24 mbar (18.0 mm Hg)

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**Vapour density:** 0.6

**Boiling point/boiling range:** > 100.0 °C (212.0 °F)

**Water solubility:** complete

**pH:** 1

**Flash point:** does not flash

**Evaporation rate:** No data available

**Flammability (Solid; gas):** No data available

**Upper explosion limit:** No data available

**Lower explosion limit:** No data available

**Partition coefficient: n-octanol/water:** No data available

**Auto-ignition temperature:** No data available

**Decomposition temperature:** No data available

**Viscosity:** No data available

**Explosive properties:** No data available

**Oxidizing properties:** No data available

### 10. Stability and reactivity

**Reactivity:** No data available

**Chemical stability:** Stable under normal conditions.

**Possibility of hazardous reactions:** Hazardous polymerisation does not occur.

**Conditions to avoid:** No data available

**Incompatible materials:** Bases, Metals.

**Hazardous decomposition products:** Sulphur oxides

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## 11. Toxicological information

### Effects of Exposure

#### General advice:

Contains: Aluminium sulphate. Ingestion may cause nausea, vomiting, abdominal pains, and diarrhea.

Contains: Sulphuric acid. International Agency for Research on Cancer (IARC) has determined that occupational exposure to strong inorganic mists or vapours containing sulfuric acid is carcinogenic to humans. Acute overexposure to extremely high airborne concentrations of respiratory irritants has been associated with development of an asthma-like reactive airways syndrome (RADS) in susceptible individuals. The following exposure effects are based on pH of the solution, concentration of the base, and a review of the literature.

**Inhalation:** Expected to be a low hazard for recommended handling.

**Eyes:** Causes serious eye damage.

**Skin:** Causes severe skin burns.

**Ingestion:** Expected to be a low ingestion hazard.

#### Acute Toxicity Data:

- Skin irritation: Corrosive
- Eye irritation: Corrosive

#### Data for Aluminium sulphate (CAS 10043-01-3):

##### Acute Toxicity Data:

Oral LD50 (rat): > 5,000 mg/kg (Information taken from reference works and the literature.)

- Skin irritation: No skin irritation
- Eye irritation: moderate

##### Mutagenicity/Genotoxicity Data:

- Cell transformation assay: negative

#### Data for Sulphuric acid (CAS 7664-93-9):

##### Acute Toxicity Data:

Oral LD50 (rat): 2,140 mg/kg

- Inhalation LC50 (rat): 510 mg/m<sup>3</sup> / 2 hr
- Dermal LD50: > 36,600 mg/kg

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### 12. Ecological information

The following properties are ESTIMATED from the components of the preparations.

#### Potential Toxicity:

Toxicity to fish (LC50):	> 100 mg/l
Toxicity to daphnia (EC50):	10 - 100 mg/l

**Persistence and degradability:** Not readily biodegradable.

#### Bioaccumulative potential

No data available

#### Mobility in soil

No information available.

### 13. Disposal considerations

Discharge, treatment, or disposal may be subject to federal, state, commonwealth, provincial, or local laws. Since emptied containers retain product residue, follow label warnings even after container is emptied.

### 14. Transport information

The information below is provided to assist in documentation. It represents the dangerous goods classification before any regulatory exceptions are taken (e.g. "limited quantity") and therefore may not represent the final classification. The final classification as it pertains to the product packaging configuration (including labeling, marking, and exceptions) may be obtained via the Dangerous Goods Worksheet which can be found at [www.kodak.com/go/ship](http://www.kodak.com/go/ship).

<b>IATA:</b>	UN number:	UN3264
	Proper shipping name:	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Sulphuric acid, aluminum sulphate)
	Class:	8
	Packaging group:	III

<b>IMDG:</b>	UN number:	UN3264
	Proper shipping name:	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Sulphuric acid, aluminum sulphate)
	Class:	8

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	Packaging group:	III
<b>US DOT:</b>	UN number:	UN3264
	Proper shipping name:	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Sulphuric acid, aluminum sulphate)
	Class:	8
	Packaging group:	III

For more transportation information, go to: [www.kodak.com/go/ship](http://www.kodak.com/go/ship).

### 15. Regulatory information

#### Notification status

Regulatory List	Notification status
TSCA	All listed
DSL	All listed
NDSL	None listed
EINECS	All listed
ELINCS	None listed
NLP	None listed
AICS	All listed
IECS	All listed
ENCS	All listed
ECI	All listed
NZIoC	All listed
PICCS	All listed

"Not all listed" indicates one or more component is either not on the public Inventory or is subject to exemption requirements. If additional information is needed contact Kodak.

#### Other regulations

American Conference of Governmental Industrial Hygienists (ACGIH):	A2 - Suspected Human Carcinogen: Sulphuric acid
International Agency for Research on Cancer (IARC):	Group 1 - Carcinogenic to Humans: Sulphuric acid

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U.S. National Toxicology Program (NTP):	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
U.S. Occupational Safety and Health Administration (OSHA):	OSHA Carcinogen or Potential Carcinogen: Sulphuric acid
California Prop. 65	This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.
U.S. - CERCLA/SARA (40 CFR § 302.4 Designation of hazardous substances):	Aluminium sulphate , Sulphuric acid
U.S. - CERCLA/SARA - Section 302 (40 CFR § 355 Appendices A and B - The List of Extremely Hazardous Substances and Their Threshold Planning Quantities):	Sulphuric acid
U.S. - CERCLA/SARA - Section 313 (40 CFR § 372.65 Toxic Chemical Release Reporting):	Sulphuric acid
U.S. - California - 8 CCR Section 339 - Director's List of Hazardous Substances:	Aluminium sulphate , Sulphuric acid
U.S. - California - 8 CCR Section 5200-5220 - Specifically Regulated Carcinogens:	No components found on the California Specifically Regulated Carcinogens List.
U.S. - California - 8 CCR Section 5203 Carcinogens:	No components found on the California Section 5203 Carcinogens List.
U.S. - California - 8 CCR Section 5209 Carcinogens:	No components found on the California Section 5209 Carcinogens List.
U.S. - Massachusetts - General Law Chapter 111F (MGL c 111F) - Hazardous Substances Disclosure by Employers (a.k.a. Right to Know Law):	Aluminium sulphate , Sulphuric acid
U.S. - Minnesota Employee Right-to-Know (5206.0400, Subpart 5. List of Hazardous Substances):	Aluminium sulphate , Sulphuric acid
U.S. - New Jersey - Worker and Community Right to Know Act (N.J.S.A. 34:5A-1):	Aluminium sulphate , Sulphuric acid
U.S. - Pennsylvania - Part XIII. Worker and Community Right-to-Know Act (Chapter 323 Hazardous Substance List, Appendix A):	Water , Aluminium sulphate , Sulphuric acid

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## 16. Other information

The data below reflects current legislative requirements whereas the product in your possession may carry a different version of the label depending on the date of manufacture.

### US/Canadian Label Statements:

#### KODAK Rapid Fixer, Part B

##### Contains:

Aluminium sulphate (10043-01-3), Sulphuric acid (7664-93-9)

##### Symbol(s):



**Signal word:** Danger

**Hazard statements:** May be corrosive to metals. Causes severe skin burns and eye damage.

##### Precautionary statements:

**Prevention:** Keep only in original container. Wear protective gloves/protective clothing/eye protection/face protection. Do not breathe dust/ fume/ gas/ mist/ vapours/ spray. Wash thoroughly after handling.

**Response:** Absorb spillage to prevent material damage. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/ physician. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower. Wash contaminated clothing before reuse. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

**Storage:** Store in corrosive resistant container with resistant inliner.

**Disposal:** Dispose of contents/container in accordance with local/regional/national/international regulation.

**FIRST AID:** IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/ physician. IF IN EYES: Rinse cautiously with

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water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician. IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower. Wash contaminated clothing before re-use. If swallowed, DO NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a physician or poison control centre immediately. Keep out of reach of children. Do not handle or use until safety precautions in Material Safety Data Sheet (MSDS) have been read and understood. Since emptied containers retain product residue, follow label warnings even after container is emptied. **IN CASE OF FIRE:** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. **IN CASE OF SPILL:** Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination. Additional Components Include: Water (7732-18-5) .

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The information contained herein is furnished without warranty of any kind. Users should consider these data only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use and disposal of these materials and the safety and health of employees and customers and the protection of the environment. The information relating to the working solution is for guidance purposes only, and is based on correct mixing and use of the product according to instructions.

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R-1, S-3, F-0, C-0

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## 1. Identification of the substance/mixture and of the company/undertaking

**Product name:** KODAK T-MAX RS Developer and Replenisher, Part A

**Product code:** 8446163 - Part A

**Synonyms:** PCD 5492

**Relevant identified uses of the substance or mixture and uses advised against:**

**Identified uses:** photographic processing chemical (developer/activator). For industrial use only.

**Supplier:** Kodak Alaris Inc., 2400 Mount Read Boulevard, Rochester, NY 14615

IN EMERGENCY, telephone: 1-800-424-9300 or +1 703-527-3887.

For further information about this product, email [EHS-Questions@Kodakalaris.com](mailto:EHS-Questions@Kodakalaris.com).

## 2. Hazards identification

**Classification of the chemical in accordance with paragraph (d) of 29 CFR 1910.1200:**

Hazard class	Hazard category	Route of exposure
Skin corrosion/irritation	Category 2	--
Serious eye damage/eye irritation	Category 2A	--
Skin sensitisation	Category 1	--
Target Organ Systemic Toxicant - Single exposure	Category 1	--
Target Organ Systemic Toxicant - Single exposure	Category 2	--
Target Organ Systemic Toxicant - Repeated exposure	Category 1	--

### GHS-Labeling

**Contains:**

Diethanolamine (111-42-2), Sulphur dioxide (7446-09-5), Hydroquinone (123-31-9), Sodium bisulphite (7631-90-5), 4-hydroxymethyl-4-methyl-1-phenyl-3-pyrazolidinone (13047-13-7)

**Symbol(s):**

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**Signal word:** Danger

**Hazard statements:** Causes skin irritation. Causes serious eye irritation. May cause an allergic skin reaction. Causes damage to organs. (Respiratory system.) May cause damage to organs. (Kidney, Liver, Blood, Testes.) May cause damage to organs through prolonged or repeated exposure. (Respiratory system.)

**Precautionary statements:**

**Prevention:** Wear protective gloves/ eye protection/ face protection. Do not breathe dust/ fume/ gas/ mist/ vapours/ spray. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product.

**Response:** IF exposed or concerned: Call a POISON CENTER or doctor/ physician. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/ attention. IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/ attention. Take off contaminated clothing and wash it before reuse. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

**Storage:** Store in a well-ventilated place. Keep cool.

**Disposal:** Dispose of contents/container in accordance with local/regional/national/international regulation.

**HMIS III Hazard Ratings:** Health - 2\*, Flammability - 1, Physical Hazard - 0

**NFPA Hazard Ratings:** Health - 3, Flammability - 1, Instability - 0

NOTE: HMIS III and NFPA 704 (2007) hazard indexes involve data review and interpretation that may vary among companies. They are intended only for rapid, general identification of the magnitude of the potential hazards. To adequately address safe handling, ALL information in this MSDS must be considered.

## 3. Composition/information on ingredients

Weight percent	Components - (CAS-No.)
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30 - 35	Diethanolamine (111-42-2)
15 - 20	Sulphur dioxide (7446-09-5)
1 - 5	Hydroquinone (123-31-9)
1 - 5	Sodium bisulphite (7631-90-5)
0.1 - < 1	4-hydroxymethyl-4-methyl-1-phenyl-3-pyrazolidinone (13047-13-7)

## 4. First aid measures

**Inhalation:** If symptomatic, move to fresh air. Get medical attention if symptoms occur.

**Eyes:** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/ attention.

**Skin:** IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/ attention. Take off contaminated clothing and wash before reuse.

**Ingestion:** IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Get medical advice/ attention if you feel unwell.

**Most important symptoms and effects, both acute and delayed:** No information available.

**Indication of any immediate medical attention and special treatment needed:**

**Treatment:** No information available.

## 5. Firefighting measures

**Extinguishing Media:** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Special hazards arising from the substance or mixture**

**Hazardous Combustion Products:** Carbon oxides, Nitrogen oxides (NOx), Sulphur oxides, (see also Hazardous Decomposition Products sections.)

**Special Fire-Fighting Procedures:** Wear self-contained breathing apparatus and protective clothing. Fire or excessive heat may produce hazardous decomposition products.

**Unusual Fire and Explosion Hazards:** None.

## 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures:** Refer to protective measures listed in sections 7 and 8.

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**Methods and materials for containment and cleaning up:** Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination.

**Environmental precautions:** No information available.

## 7. Handling and storage

### Precautions for safe handling

**Personal precautions:** Do not breathe dust/ fume/ gas/ mist/ vapours/ spray. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Use only with adequate ventilation. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product.

**Prevention of Fire and Explosion:** Keep from contact with oxidizing materials.

**Conditions for safe storage, including any incompatibilities:** Keep container tightly closed. Keep away from incompatible substances (see Incompatibility section.)

## 8. Exposure controls/personal protection

### Occupational exposure controls

Chemical Name	Regulatory List	Value Type	Value
Diethanolamine	ACGIH	time weighted average	1 mg/m3
		<i>Form of exposure: inhalable fraction and vapor</i>	
		<i>Skin - potential significant contribution to overall exposure by the cutaneous route</i>	
Sulphur dioxide		Short term exposure limit	0.25 ppm
	OSHA	time weighted average	5 ppm 13 mg/m3
Hydroquinone	ACGIH	time weighted average	1 mg/m3
	OSHA	time weighted average	2 mg/m3
Sodium bisulphite	ACGIH	time weighted average	5 mg/m3

**Appropriate engineering controls:** Use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. Controls should be sufficient so that applicable occupational exposure limits are not exceeded.

### Individual protection measures, such as personal protective equipment

**Eye protection:** Wear eye/face protection.

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**Hand protection:** Wear impervious gloves and protective clothing appropriate for the risk of exposure.

**Respiratory protection:** If engineering controls do not maintain airborne concentrations below recommended exposure limits, an approved respirator must be worn. Respirator type: organic vapour. A respirator should be worn if hazardous decomposition products are likely to be or have been released. Respirator type: acid gas If respirators are used, a program should be instituted to assure compliance with applicable federal, state, commonwealth, provincial, or local laws and regulations.

## 9. Physical and chemical properties

**Physical form:** liquid

**Colour:** tan

**Odour:** amine

**Specific gravity:** 1.21

**Vapour pressure (at 20.0 °C (68.0 °F)):** 24 mbar (18.0 mm Hg)

**Vapour density:** 0.6

**Boiling point/boiling range:** > 100 °C (> 212.0 °F)

**Water solubility:** complete

**pH:** 8.9

**Flash point:** does not flash

**Evaporation rate:** No data available

**Flammability (Solid; gas):** No data available

**Upper explosion limit:** No data available

**Lower explosion limit:** No data available

**Partition coefficient: n-octanol/water:** No data available

**Auto-ignition temperature:** No data available

**Decomposition temperature:** No data available

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**Viscosity:** No data available

**Explosive properties:** No data available

**Oxidizing properties:** No data available

## 10. Stability and reactivity

**Reactivity:** No data available

**Chemical stability:** Stable under normal conditions.

**Possibility of hazardous reactions:** Hazardous polymerisation does not occur.

**Conditions to avoid:** No data available

**Incompatible materials:** Strong oxidizing agents, Acids. Contact with strong acids liberates sulphur dioxide.

**Hazardous decomposition products:** Sulphur oxides, Nitrogen oxides (NOx)

## 11. Toxicological information

### Effects of Exposure

#### General advice:

Contains: Diethanolamine. Based on animal data, may cause adverse effects on the following organs/systems: kidney, liver, blood, nervous system, testes.

Contains: Hydroquinone. There is insufficient evidence for classifying hydroquinone as a suspected carcinogenic or mutagenic substance in humans. No increases in cancer rates were observed in an epidemiology study which looked at mortality among more than 800 persons employed primarily in the manufacture of hydroquinone. Carcinogenicity studies in animals were inconclusive. Rats and mice were given hydroquinone by stomach tube or at high concentrations in the diet. Responses were not consistent across route of exposure, species or sex. The International Agency for Research on Cancer (IARC) has classified hydroquinone in Group 3, i.e., "not classifiable" as a carcinogen. Hydroquinone is generally negative in bacterial mutagenicity tests; there is evidence for the clastogenicity (chromosome breakage) of hydroquinone in vivo and in vitro. The relevance of chromosomal effects in test animals in predicting human risk is unclear.

Contains: 4-hydroxymethyl-4-methyl-1-phenyl-3-pyrazolidinone. May cause adverse

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reproductive effects such as infertility based on animal data. Based on repeated-dose ingestion studies in animals, this chemical may cause blood, testicular, and adverse reproductive effects.

**Inhalation:** Expected to be a low hazard for recommended handling. In contact with strong acids or if heated, sulphites may liberate sulphur dioxide gas. Sulphur dioxide gas is irritating to the respiratory tract. Some asthmatics or hypersensitive individuals may experience difficult breathing.

**Eyes:** Causes serious eye irritation.

**Skin:** Causes skin irritation. May cause an allergic skin reaction.

**Ingestion:** Expected to be a low ingestion hazard. Some asthmatics or sulfite-sensitive individuals may experience wheezing, chest tightness, stomach upset, hives, faintness, weakness and diarrhea.

## Data for Diethanolamine (CAS 111-42-2):

### Acute Toxicity Data:

Oral LD50 (rat): 1,410 mg/kg

- Dermal LD50 (rabbit): 12,983.88 mg/kg
- Skin irritation: strong
- Eye irritation: Corrosive

Definitions for the following section(s): LOEL =lowest-observed-effect level, LOAEL = lowest-observed-adverse-effect, NOAEL = no observed-adverse-effect level, NOEL =no-observed-effect level.

### Repeated dose toxicity:

- Inhalation (, dog): NOAEL; 0.6 ppm
- Inhalation (30-day, guinea pig): NOAEL; 0.6 ppm
- Feeding study (, male rat): Lowest observable effect level; 0.01 % in diet (target organ effects: liver)
- Feeding study (30-day, male rat): Lowest observable effect level; 0.1 % in diet
- Inhalation (, male rat): NOEL; 0.6 ppm

## Data for Hydroquinone (CAS 123-31-9):

### Acute Toxicity Data:

Oral LD50 (male rat): 400 mg/kg

- Oral LD50 (male mouse): 100 - 200 mg/kg
- Dermal LD50 (guinea pig): > 1,000 mg/kg
- Dermal absorption rate: 1.1 micrograms (s) / cm<sup>2</sup> / hour
- Skin irritation: slight
- Skin Sensitization (guinea pig): positive
- Eye irritation: moderate

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## Mutagenicity/Genotoxicity Data:

- Salmonella typhimurium assay (Ames test): negative (in presence and absence of activation)
- Chromosomal aberration assay: negative (in absence of activation)
- Chromosomal aberration assay: positive (in presence of activation)
- Sister chromatid exchange (SCE) assay: positive (in presence and absence of activation)

Definitions for the following section(s): LOEL =lowest-observed-effect level, LOAEL = lowest-observed-adverse-effect, NOAEL = no observed-adverse-effect level, NOEL =no-observed-effect level.

## Repeated dose toxicity:

- Dermal (17-day, rat): NOEL; 3800 mg/kg/day
- Dermal (17-day): Lowest observable effect level; 4800 mg/kg/day

## Developmental Toxicity Data:

- Oral (female rabbit): NOEL for developmental toxicity; 25mg/kg/day
- Oral (female rat): NOAEL for developmental toxicity; mg/kg/day

## Data for Sodium bisulphite (CAS 7631-90-5):

### Acute Toxicity Data:

Oral LD50 (rat): > 1,600 mg/kg

- Dermal LD50 (rat): 2,000 mg/kg
- Eye irritation (May irritate eyes.): mild

## Data for 4-hydroxymethyl-4-methyl-1-phenyl-3-pyrazolidinone (CAS 13047-13-7):

### Acute Toxicity Data:

Oral LD50 (rat): 566 mg/kg

- Dermal LD50: > 1,000 mg/kg
- Skin irritation: slight
- Skin irritation: slight exacerbation (repeated skin application)
- Skin Sensitization: slight
- Eye irritation (unwashed eyes): strong
- Eye irritation (washed eyes): slight to moderate

Definitions for the following section(s): LOEL =lowest-observed-effect level, LOAEL = lowest-observed-adverse-effect, NOAEL = no observed-adverse-effect level, NOEL =no-observed-effect level.

## Repeated dose toxicity:

- Oral (12-day, rat): NOEL; 88 mg/kg/day
- Oral (12-day, rat): Lowest observable effect level; 440 mg/kg/day (target organ effects: blood, target organ effects: testes)
- Oral (28-day, rat): NOEL; 10 mg/kg/day

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- Oral (28-day, rat): Lowest observable effect level; 40 mg/kg/day (target organ effects: blood, target organ effects: testes)

### 12. Ecological information

The following properties are ESTIMATED from the components of the preparations.

#### Potential Toxicity:

Toxicity to fish (LC50): 1 - 10 mg/l

Toxicity to daphnia (EC50): 1 - 10 mg/l

**Persistence and degradability:** Readily biodegradable.

#### Bioaccumulative potential

No data available

#### Mobility in soil

No information available.

### 13. Disposal considerations

Discharge, treatment, or disposal may be subject to federal, state, commonwealth, provincial, or local laws. Since emptied containers retain product residue, follow label warnings even after container is emptied.

### 14. Transport information

Not regulated for all modes of transportation.

For more transportation information, go to: [www.kodak.com/go/ship](http://www.kodak.com/go/ship).

### 15. Regulatory information

#### Notification status

Regulatory List	Notification status
TSCA	All listed
DSL	All listed

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NDSL	None listed
EINECS	All listed
ELINCS	None listed
NLP	None listed
AICS	All listed
IECS	All listed
ENCS	All listed
ECI	All listed
NZIoC	All listed
PICCS	All listed

"Not all listed" indicates one or more component is either not on the public Inventory or is subject to exemption requirements. If additional information is needed contact Kodak.

### Other regulations

American Conference of Governmental Industrial Hygienists (ACGIH):	A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans: Diethanolamine , Hydroquinone
International Agency for Research on Cancer (IARC):	Group 2B - Possibly Carcinogenic to Humans: Diethanolamine
U.S. National Toxicology Program (NTP):	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
U.S. Occupational Safety and Health Administration (OSHA):	OSHA Carcinogen or Potential Carcinogen: Diethanolamine
California Prop. 65	WARNING! This product contains a chemical known to the State of California to cause cancer.  WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.
U.S. - CERCLA/SARA (40 CFR § 302.4 Designation of hazardous substances):	Diethanolamine , Hydroquinone , Sodium bisulphite

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U.S. - CERCLA/SARA - Section 302 (40 CFR § 355 Appendices A and B - The List of Extremely Hazardous Substances and Their Threshold Planning Quantities):	Sulphur dioxide , Hydroquinone
U.S. - CERCLA/SARA - Section 313 (40 CFR § 372.65 Toxic Chemical Release Reporting):	Diethanolamine , Hydroquinone
U.S. - California - 8 CCR Section 339 - Director's List of Hazardous Substances:	Diethanolamine , Sulphur dioxide , Hydroquinone , Sodium bisulphite
U.S. - California - 8 CCR Section 5200-5220 - Specifically Regulated Carcinogens:	No components found on the California Specifically Regulated Carcinogens List.
U.S. - California - 8 CCR Section 5203 Carcinogens:	No components found on the California Section 5203 Carcinogens List.
U.S. - California - 8 CCR Section 5209 Carcinogens:	No components found on the California Section 5209 Carcinogens List.
U.S. - Massachusetts - General Law Chapter 111F (MGL c 111F) - Hazardous Substances Disclosure by Employers (a.k.a. Right to Know Law):	Diethanolamine , Sulphur dioxide , Hydroquinone , Sodium bisulphite
U.S. - Minnesota Employee Right-to-Know (5206.0400, Subpart 5. List of Hazardous Substances):	Diethanolamine , Sulphur dioxide , Hydroquinone , Sodium bisulphite
U.S. - New Jersey - Worker and Community Right to Know Act (N.J.S.A. 34:5A-1):	Diethanolamine , Sulphur dioxide , Hydroquinone , Sodium bisulphite
U.S. - Pennsylvania - Part XIII. Worker and Community Right-to-Know Act (Chapter 323 Hazardous Substance List, Appendix A):	Water , Diethanolamine , Sulphur dioxide , Hydroquinone , Sodium bisulphite

### 16. Other information

The data below reflects current legislative requirements whereas the product in your possession may carry a different version of the label depending on the date of manufacture.

#### US/Canadian Label Statements:

#### KODAK T-MAX RS Developer and Replenisher, Part A

##### Contains:

Diethanolamine (111-42-2), Sulphur dioxide (7446-09-5), Hydroquinone (123-31-9), Sodium bisulphite (7631-90-5), 4-hydroxymethyl-4-methyl-1-phenyl-3-pyrazolidinone (13047-13-7)

##### Symbol(s):

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**Signal word:** Danger

**Hazard statements:** Causes skin irritation. Causes serious eye irritation. May cause an allergic skin reaction. Causes damage to organs. (Respiratory system.) May cause damage to organs. (Kidney, Liver, Blood, Testes.) May cause damage to organs through prolonged or repeated exposure. (Respiratory system.)

**Precautionary statements:**

**Prevention:** Wear protective gloves/ eye protection/ face protection. Do not breathe dust/ fume/ gas/ mist/ vapours/ spray. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product.

**Response:** IF exposed or concerned: Call a POISON CENTER or doctor/ physician. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/ attention. IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/ attention. Take off contaminated clothing and wash it before reuse. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

**Storage:** Store in a well-ventilated place. Keep cool.

**Disposal:** Dispose of contents/container in accordance with local/regional/national/international regulation.

**FIRST AID:** If symptomatic, move to fresh air. Get medical attention if symptoms occur. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/ attention. IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/ attention. Take off contaminated clothing and wash before reuse. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Get medical advice/ attention if you feel unwell. Keep out of reach of children. Do not handle or use until safety precautions in Material Safety Data Sheet (MSDS) have been read and understood. Since emptied containers retain product residue, follow label warnings even after container is emptied. **IN CASE OF FIRE:** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. **IN CASE OF SPILL:** Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination. Additional Components Include: Water (7732-18-5)

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The information contained herein is furnished without warranty of any kind. Users should consider these data only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use and disposal of these materials and the safety and health of employees and customers and the protection of the environment. The information relating to the working solution is for guidance purposes only, and is based on correct mixing and use of the product according to instructions.

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R-2, S-2, F-1, C-0

# Safety Data Sheet

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**Kodak** alaris

## 1. Identification of the substance/mixture and of the company/undertaking

**Product name:** KODAK T-MAX RS Developer and Replenisher, Part B

**Product code:** 8446163 - Part B

**Synonyms:** PCD 5506

**Relevant identified uses of the substance or mixture and uses advised against:**

**Identified uses:** photographic processing chemical. For industrial use only.

**Supplier:** Kodak Alaris Inc., 2400 Mount Read Boulevard, Rochester, NY 14615

IN EMERGENCY, telephone: 1-800-424-9300 or +1 703-527-3887.

For further information about this product, email [EHS-Questions@Kodakalaris.com](mailto:EHS-Questions@Kodakalaris.com).

## 2. Hazards identification

**Classification of the chemical in accordance with paragraph (d) of 29 CFR 1910.1200:**

Hazard class	Hazard category	Route of exposure
Acute toxicity	Category 4	Oral
Skin irritation	Category 2	--
Serious eye damage	Category 1	--
Specific target organ toxicity - repeated exposure	Category 2	--

### GHS-Labeling

**Contains:**

Diethylene glycol (111-46-6), Acetic acid (64-19-7)

**Symbol(s):**



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**Signal word:** Danger

**Hazard statements:** Harmful if swallowed. Causes skin irritation. Causes serious eye damage. May cause damage to organs through prolonged or repeated exposure. (Kidney.)

**Precautionary statements:**

**Prevention:** Do not breathe dust/ fume/ gas/ mist/ vapours/ spray. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/ eye protection/ face protection.

**Response:** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician. IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth. IF ON SKIN: Wash with plenty of soap and water. Specific treatment (see supplemental first aid instructions on this label). If skin irritation occurs: Get medical advice/ attention. Take off contaminated clothing and wash it before reuse. Get medical advice/ attention if you feel unwell.

**Disposal:** Dispose of contents/container in accordance with local/regional/national/international regulation.

**HMIS III Hazard Ratings:** Health - 3\*, Flammability - 1, Physical Hazard - 1

**NFPA Hazard Ratings:** Health - 3, Flammability - 1, Instability - 1

NOTE: HMIS III and NFPA 704 (2007) hazard indexes involve data review and interpretation that may vary among companies. They are intended only for rapid, general identification of the magnitude of the potential hazards. To adequately address safe handling, ALL information in this MSDS must be considered.

## 3. Composition/information on ingredients

Weight percent	Components - (CAS-No.)
90 - 99	Diethylene glycol (111-46-6)
1 - 5	Acetic acid (64-19-7)
0.1 - < 1	1,4-diphenyl-3-(phenylammonio)-1H-1,2,4-triazolium (2218-94-2)

## 4. First aid measures

**Inhalation:** If symptomatic, move to fresh air. Get medical attention if symptoms occur.

**Eyes:** Immediately flush the contaminated eye(s) with water for at least 60 minutes, while holding the eyelid(s) open. If a contact lens is present, DO NOT delay irrigation or attempt to remove the lens.

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Neutral saline solution may be used as soon as it is available. **DO NOT INTERRUPT FLUSHING.** Contact a physician or poison control center immediately. Continue flushing the eye(s) until the physician advises to stop. If necessary, continue flushing during transport to an emergency care facility.

**Skin:** In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention if symptoms occur. Wash contaminated clothing before re-use. Destroy or thoroughly clean contaminated shoes.

**Ingestion:** If swallowed, only induce vomiting as directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention if symptoms occur. Rinse mouth.

**Most important symptoms and effects, both acute and delayed:** No information available.

**Indication of any immediate medical attention and special treatment needed:**

**Treatment:** No information available.

## 5. Firefighting measures

**Extinguishing Media:** Water spray, Carbon dioxide (CO<sub>2</sub>), Dry chemical, Alcohol-resistant foam.

**Special hazards arising from the substance or mixture**

**Hazardous Combustion Products:** Carbon oxides

**Special Fire-Fighting Procedures:** Wear self-contained breathing apparatus and protective clothing.

**Unusual Fire and Explosion Hazards:** Forms peroxides of unknown stability.

## 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures:** If peroxide formation is suspected, do not open or move container. Minimize exposure to air. After opening, purge container with nitrogen before reclosing. Periodically test for peroxide formation on long-term storage. Do not distill or allow to evaporate to near dryness. Keep away from heat and flame. Refer to protective measures listed in sections 7 and 8.

**Methods and materials for containment and cleaning up:** Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination.

Prevent runoff from entering drains, sewers, or streams.

**Environmental precautions:** No information available.

## 7. Handling and storage

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## Precautions for safe handling

**Personal precautions:** Do not breathe dust/ fume/ gas/ mist/ vapours/ spray. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Use only outdoors or in a well-ventilated area. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product.

**Prevention of Fire and Explosion:** Keep from contact with oxidizing materials. If peroxide formation is suspected, do not open or move container. Minimize exposure to air. After opening, purge container with nitrogen before reclosing. Periodically test for peroxide formation on long-term storage. Do not distill or allow to evaporate to near dryness. Keep material from heat, light, and flame.

**Conditions for safe storage, including any incompatibilities:** Protect against light. Keep container tightly closed. Keep away from incompatible substances (see Incompatibility section.)

## 8. Exposure controls/personal protection

### Occupational exposure controls

Chemical Name	Regulatory List	Value Type	Value
Acetic acid	ACGIH	Time weighted average	10 ppm
Acetic acid		Short term exposure limit	15 ppm
	OSHA	Time weighted average	10 ppm 25 mg/m3
	ACGIH	Time weighted average	10 ppm
		Short term exposure limit	15 ppm
	OSHA	Time weighted average	10 ppm 25 mg/m3

**Appropriate engineering controls:** Use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. Controls should be sufficient so that applicable occupational exposure limits are not exceeded.

### Individual protection measures, such as personal protective equipment

**Eye protection:** Wear vapour-tight chemical goggles and a face shield.

**Hand protection:** Wear protective gloves/ protective clothing.

**Respiratory protection:** If engineering controls do not maintain airborne concentrations below recommended exposure limits, an approved respirator must be worn. If respirators are used, a program should be instituted to assure compliance with applicable federal, state, commonwealth, provincial, or local laws and regulations.

## 9. Physical and chemical properties

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**Physical form:** liquid

**Colour:** amber

**Odour:** vinegar

**Specific gravity:** 1.12

**Vapour pressure (at 20.0 °C (68.0 °F)):** 24 mbar (18.0 mm Hg)

**Vapour density:** 0.6

**Boiling point/boiling range:** > 100 °C (> 212.0 °F)

**Water solubility:** complete

**pH:** No data available

**Flash point:** > 93.33 °C (> 200.0 °F)

**Evaporation rate:** No data available

**Flammability (Solid; gas):** No data available

**Upper explosion limit:** No data available

**Lower explosion limit:** No data available

**Partition coefficient: n-octanol/water:** No data available

**Auto-ignition temperature:** No data available

**Decomposition temperature:** No data available

**Viscosity:** No data available

**Explosive properties:** No data available

**Oxidizing properties:** No data available

### 10. Stability and reactivity

**Reactivity:** No data available

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**Chemical stability:** Stable; however, forms peroxides of unknown stability.

**Possibility of hazardous reactions:** Hazardous polymerisation does not occur.

**Conditions to avoid:** No data available

**Incompatible materials:** Strong oxidizing agents.

**Hazardous decomposition products:** None under normal conditions of use.

## 11. Toxicological information

### Effects of Exposure

**Inhalation:** Airborne dust/mist/vapor may be irritating.

**Eyes:** Causes serious eye damage.

**Skin:** Causes skin irritation.

**Ingestion:** Harmful if swallowed.

### Data for Diethylene glycol (CAS 111-46-6):

#### Acute Toxicity Data:

Oral LD50 (Rat): 12,565 mg/kg

- Oral LD50 Oral (Humans): 1,120 mg/kg
- Inhalation LC50 (Rat): > 5.08 mg/l / 4 hr
- Dermal LD50 (Rabbit): 11,890 mg/kg
- Skin irritation: slight to moderate
- Eye irritation: mild

#### Mutagenicity/Genotoxicity Data:

- Ames test: negative (in presence and absence of activation)

### Data for Acetic acid (CAS 64-19-7):

#### Acute Toxicity Data:

Oral LD50 (Rat): 3,320 mg/kg

- Oral LD50 (Rat): 3,310 mg/kg
- Inhalation LC50 (Rat): 11.4 mg/l / 4 hr
- Dermal LD50 (Rabbit): 1,060 mg/kg
- Skin irritation: severe
- Eye irritation (washed eyes): severe

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- Eye irritation (unwashed eyes): severe

### Data for 1,4-diphenyl-3-(phenylammonio)-1H-1,2,4-triazolium (CAS 2218-94-2):

#### Acute Toxicity Data:

Oral LD50 (Rat): 50 - 400 mg/kg

- Dermal LD50 (Guinea pig): > 2,200 mg/kg
- Skin irritation: very slight

#### Carcinogenicity

American Conference of Governmental Industrial Hygienists (ACGIH):	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
International Agency for Research on Cancer (IARC):	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
U.S. National Toxicology Program (NTP):	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
U.S. Occupational Safety and Health Administration (OSHA):	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
California Prop. 65	This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

## 12. Ecological information

The following properties are ESTIMATED from the components of the preparations.

#### Potential Toxicity:

Toxicity to fish (LC50):	> 100 mg/l
Toxicity to daphnia (EC50):	> 100 mg/l

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Toxicity to algae (IC50): > 100 mg/l

Toxicity to other organisms (EC50): > 100 mg/l

**Persistence and degradability:** Readily biodegradable

**Chemical Oxygen Demand (COD):** ca. 1731 g/l

**Biochemical Oxygen Demand (BOD):** ca. 206 g/l

### Bioaccumulative potential

No data available

### Mobility in soil

No information available.

## 13. Disposal considerations

Discharge, treatment, or disposal may be subject to federal, state, commonwealth, provincial, or local laws. Since emptied containers retain product residue, follow label warnings even after container is emptied.

## 14. Transport information

Not regulated for all modes of transportation.

For more transportation information, go to: [www.kodak.com/go/ship](http://www.kodak.com/go/ship).

## 15. Regulatory information

### Notification status

Regulatory List	Notification status
TSCA	All listed
DSL	All listed
NDSL	None listed
EINECS	All listed
ELINCS	None listed

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NLP	None listed
AICS	All listed
IECS	All listed
ENCS	Not all listed
ECI	All listed
NZIoC	All listed
PICCS	Not all listed

"Not all listed" indicates one or more component is either not on the public Inventory or is subject to exemption requirements. If additional information is needed contact Kodak.

### Other regulations

U.S. - CERCLA/SARA (40 CFR § 302.4 Designation of hazardous substances):	Acetic acid
U.S. - CERCLA/SARA - Section 302 (40 CFR § 355 Appendices A and B - The List of Extremely Hazardous Substances and Their Threshold Planning Quantities):	No components of this product are subject to the SARA Section 302 (40 CFR 355) reporting requirements.
U.S. - CERCLA/SARA - Section 313 (40 CFR § 372.65 Toxic Chemical Release Reporting):	No components of this product are subject to the SARA Section 313 (40 CFR 372.65) reporting requirements.
U.S. - California - 8 CCR Section 339 - Director's List of Hazardous Substances:	Acetic acid
U.S. - California - 8 CCR Section 5200-5220 - Specifically Regulated Carcinogens:	No components found on the California Specifically Regulated Carcinogens List.
U.S. - California - 8 CCR Section 5203 Carcinogens:	No components found on the California Section 5203 Carcinogens List.
U.S. - California - 8 CCR Section 5209 Carcinogens:	No components found on the California Section 5209 Carcinogens List.
U.S. - Massachusetts - General Law Chapter 111F (MGL c 111F) - Hazardous Substances Disclosure by Employers (a.k.a. Right to Know Law):	Acetic acid
U.S. - Minnesota Employee Right-to-Know (5206.0400, Subpart 5. List of Hazardous Substances):	Diethylene glycol , Acetic acid

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U.S. - New Jersey - Worker and Community Right to Know Act (N.J.S.A. 34:5A-1): Acetic acid

U.S. - Pennsylvania - Part XIII. Worker and Community Right-to-Know Act (Chapter 323 Hazardous Substance List, Appendix A): Diethylene glycol , Acetic acid

### 16. Other information

The data below reflects current legislative requirements whereas the product in your possession may carry a different version of the label depending on the date of manufacture.

#### US/Canadian Label Statements:

#### KODAK T-MAX RS Developer and Replenisher, Part B

##### Contains:

Diethylene glycol (111-46-6), Acetic acid (64-19-7)

##### Symbol(s):



**Signal word:** Danger

**Hazard statements:** Harmful if swallowed. Causes skin irritation. Causes serious eye damage. May cause damage to organs through prolonged or repeated exposure. (Kidney.)

#### Precautionary statements:

**Prevention:** Do not breathe dust/ fume/ gas/ mist/ vapours/ spray. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/ eye protection/ face protection.

**Response:** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician. IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth. IF ON SKIN: Wash with plenty of soap and water. Specific treatment (see supplemental first aid instructions on this label). If skin irritation occurs: Get medical advice/ attention. Take off contaminated clothing and wash it before reuse. Get medical advice/ attention if you feel unwell.

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**Disposal:** Dispose of contents/container in accordance with local/regional/national/international regulation.

**FIRST AID:** If symptomatic, move to fresh air. Get medical attention if symptoms occur. Immediately flush the contaminated eye(s) with water for at least 60 minutes, while holding the eyelid(s) open. If a contact lens is present, DO NOT delay irrigation or attempt to remove the lens. Neutral saline solution may be used as soon as it is available. DO NOT INTERRUPT FLUSHING. Contact a physician or poison control center immediately. Continue flushing the eye(s) until the physician advises to stop. If necessary, continue flushing during transport to an emergency care facility. In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention if symptoms occur. Wash contaminated clothing before re-use. Destroy or thoroughly clean contaminated shoes. If swallowed, only induce vomiting as directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention if symptoms occur. Rinse mouth. Keep out of reach of children. Do not handle or use until safety precautions in Material Safety Data Sheet (MSDS) have been read and understood. Since emptied containers retain product residue, follow label warnings even after container is emptied. **IN CASE OF FIRE:** Water spray, Carbon dioxide (CO<sub>2</sub>), Dry chemical, Alcohol-resistant foam. **IN CASE OF SPILL:** Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination. Prevent runoff from entering drains, sewers, or streams.

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The information contained herein is furnished without warranty of any kind. Users should consider these data only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use and disposal of these materials and the safety and health of employees and customers and the protection of the environment. The information relating to the working solution is for guidance purposes only, and is based on correct mixing and use of the product according to instructions.

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R-2, S-3, F-1, C-1E

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## 1. Identification of the substance/mixture and of the company/undertaking

**Product name:** KODAK DEKTOL Developer (Single Powder)

**Product code:** 1464734

**Synonyms:** PCD 224

**Relevant identified uses of the substance or mixture and uses advised against:**

**Identified uses:** photographic processing chemical (developer/activator). For industrial use only.

**Supplier:** Kodak Alaris Inc., 2400 Mount Read Boulevard, Rochester, NY 14615

IN EMERGENCY, telephone: 1-800-424-9300 or +1 703-527-3887.

For further information about this product, email [EHS-Questions@Kodakalaris.com](mailto:EHS-Questions@Kodakalaris.com).

## 2. Hazards identification

**Classification of the chemical in accordance with paragraph (d) of 29 CFR 1910.1200:**

Hazard class	Hazard category	Route of exposure
Acute toxicity	Category 4	Oral
Acute toxicity	Category 4	Dermal
Skin corrosion/irritation	Category 2	--
Eye irritation	Category 2A	--
Skin sensitisation	Category 1	--
Specific target organ toxicity - single exposure	Category 2	--
Specific target organ toxicity - repeated exposure	Category 2	--

### GHS-Labeling

**Contains:**

Polyphosphoric acids, sodium salts (68915-31-1), Sodium carbonate, monohydrate (5968-11-6), Sodium sulphite (7757-83-7), Hydroquinone (123-31-9), Bis(4-hydroxy-N-methylanilinium) sulphate (55-55-0)

**Symbol(s):**

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**Signal word:** Warning

**Hazard statements:** Harmful if swallowed. Harmful in contact with skin. Causes skin irritation. Causes serious eye irritation. May cause an allergic skin reaction. May cause damage to organs. (Kidney.) May cause damage to organs through prolonged or repeated exposure. (Kidney, Blood.)

**Precautionary statements:**

**Prevention:** Wear protective gloves/ protective clothing/ eye protection/ face protection. Do not breathe dust/ fume/ gas/ mist/ vapours/ spray. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product.

**Response:** IF exposed or if you feel unwell: Call a POISON CENTER or doctor/ physician. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/ attention. IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/ attention. Take off contaminated clothing and wash before reuse. IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth.

**Storage:** Store in a well-ventilated place. Keep cool.

**Disposal:** Dispose of contents/container in accordance with local/regional/national/international regulation.

**HMIS III Hazard Ratings:** Health - 2\*, Flammability - 0, Physical Hazard - 0

**NFPA Hazard Ratings:** Health - 3, Flammability - 0, Instability - 0

NOTE: HMIS III and NFPA 704 (2007) hazard indexes involve data review and interpretation that may vary among companies. They are intended only for rapid, general identification of the magnitude of the potential hazards. To adequately address safe handling, ALL information in this MSDS must be considered.

<b>3. Composition/information on ingredients</b>
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Weight	Components - (CAS-No.)
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## percent

50 - 55	Sodium carbonate, monohydrate (5968-11-6)
30 - 35	Sodium sulphite (7757-83-7)
5 - 10	Hydroquinone (123-31-9)
1 - 5	Bis(4-hydroxy-N-methylanilinium) sulphate (55-55-0)
1 - 5	Polyphosphoric acids, sodium salts (68915-31-1)
1 - 5	Potassium bromide (7758-02-3)
0.1 - < 1	Boric anhydride (1303-86-2)

## 4. First aid measures

**Inhalation:** If inhaled, remove to fresh air. Get medical attention if symptoms occur.

**Eyes:** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/ attention.

**Skin:** IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/ attention. Take off contaminated clothing and wash before reuse.

**Ingestion:** IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth.

**Most important symptoms and effects, both acute and delayed:** No information available.

**Indication of any immediate medical attention and special treatment needed:**

**Treatment:** Absorption of this material into the body leads to the formation of methemoglobin that, in sufficient concentration, causes cyanosis. Since reversion of methemoglobin to hemoglobin occurs spontaneously after termination of exposure, moderate degrees of cyanosis need to be treated only by supportive measures such as bed rest and oxygen inhalation. Thorough cleansing of the entire contaminated area of the body, including scalp and nails, is of utmost importance. If cyanosis is severe, intravenous injection of methylene blue, one milligram per kilogram of body weight, may be of value.

## 5. Firefighting measures

**Extinguishing Media:** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Special hazards arising from the substance or mixture**

**Hazardous Combustion Products:** None (noncombustible), (see also Hazardous Decomposition Products sections.)

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**Special Fire-Fighting Procedures:** Wear self-contained breathing apparatus and protective clothing. Fire or excessive heat may produce hazardous decomposition products.

**Unusual Fire and Explosion Hazards:** None.

## 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures:** Refer to protective measures listed in sections 7 and 8.

**Methods and materials for containment and cleaning up:** Shovel into suitable container for disposal. Avoid dust formation. Clean surface thoroughly to remove residual contamination.

**Environmental precautions:** No information available.

## 7. Handling and storage

### Precautions for safe handling

**Personal precautions:** Do not breathe dust at concentrations greater than the exposure limits. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Use only with adequate ventilation. Wash thoroughly after handling. Do not eat, drink or smoke when using this product.

**Prevention of Fire and Explosion:** No special technical protective measures required.

**Conditions for safe storage, including any incompatibilities:** Keep container tightly closed. Keep away from incompatible substances (see Incompatibility section.)

## 8. Exposure controls/personal protection

### Occupational exposure controls

Chemical Name	Regulatory List	Value Type	Value
Hydroquinone	ACGIH	time weighted average	1 mg/m3
Hydroquinone	OSHA	time weighted average	2 mg/m3
Sulphur dioxide	ACGIH	Short term exposure limit	0.25 ppm
	OSHA	time weighted average	5 ppm 13 mg/m3

**Appropriate engineering controls:** Use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. Controls should be sufficient so that applicable occupational exposure limits are not exceeded.

**Individual protection measures, such as personal protective equipment**

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**Eye protection:** Wear eye/face protection.

**Hand protection:** Wear protective gloves.

**Respiratory protection:** If engineering controls do not maintain airborne concentrations below recommended exposure limits, an approved respirator must be worn. Respirator type: N95 Particulate Filter. A respirator should be worn if hazardous decomposition products are likely to be or have been released. Respirator type: acid gas See Stability and Reactivity Section. If respirators are used, a program should be instituted to assure compliance with applicable federal, state, commonwealth, provincial, or local laws and regulations.

## 9. Physical and chemical properties

**Physical form:** solid (powder)

**Colour:** white

**Odour:** odourless

**Specific gravity:** No data available

**Vapour pressure (at 20.0 °C (68.0 °F)):** negligible

**Vapour density:** not applicable

**Boiling point/boiling range:** not applicable

**Melting point/range:** No data available

**Water solubility:** appreciable

**pH:** not applicable

**Flash point:** not applicable

**Evaporation rate:** No data available

**Flammability (Solid; gas):** No data available

**Upper explosion limit:** No data available

**Lower explosion limit:** No data available

**Partition coefficient: n-octanol/water:** No data available

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**Auto-ignition temperature:** No data available

**Decomposition temperature:** No data available

**Viscosity:** No data available

**Explosive properties:** No data available

**Oxidizing properties:** No data available

## 10. Stability and reactivity

**Reactivity:** No data available

**Chemical stability:** Stable under normal conditions.

**Possibility of hazardous reactions:** Hazardous polymerisation does not occur.

**Conditions to avoid:** No data available

**Incompatible materials:** Acids. Contact with strong acids liberates sulphur dioxide.

**Hazardous decomposition products:** Sulphur oxides

## 11. Toxicological information

### Effects of Exposure

#### General advice:

Contains: Hydroquinone. There is insufficient evidence for classifying hydroquinone as a suspected carcinogenic or mutagenic substance in humans. No increases in cancer rates were observed in an epidemiology study which looked at mortality among more than 800 persons employed primarily in the manufacture of hydroquinone. Carcinogenicity studies in animals were inconclusive. Rats and mice were given hydroquinone by stomach tube or at high concentrations in the diet. Responses were not consistent across route of exposure, species or sex. The International Agency for Research on Cancer (IARC) has classified hydroquinone in Group 3, i.e., "not classifiable" as a carcinogen. Hydroquinone is generally negative in bacterial mutagenicity tests; there is evidence for the clastogenicity (chromosome breakage) of hydroquinone in vivo and in vitro. The relevance of chromosomal effects in test animals in predicting human risk is unclear.

Contains: Bis(4-hydroxy-N-methylanilinium) sulphate. Based on animal data, may cause adverse effects on the following organs/systems: blood, kidney, spleen. Based on animal data

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this material can produce methemoglobin which, in sufficient concentration, causes cyanosis, a blue-gray discoloration of the skin and lips caused by a reduced ability of the blood to carry oxygen.

Contains: Polyphosphoric acids, sodium salts. May cause kidney damage based on animal data.

Contains: Potassium bromide. Ingestion of bromide salts can cause nausea, vomiting, headache, irritability, delirium, memory loss, decreased appetite, joint pain, hallucinations, stupor, coma, and acne like rash on face, legs, and trunk.

Contains: Boric anhydride. Toxicity evaluation of this chemical is based, in part, on a structurally similar chemical. Based on repeated-dose ingestion studies in animals, may cause adverse reproductive and developmental effects. However, high doses to humans handling this material are not expected since oral consumption is not a likely route of significant exposure.

**Inhalation:** Expected to be a low hazard for recommended handling. In contact with strong acids or if heated, sulphites may liberate sulphur dioxide gas. Sulphur dioxide gas is irritating to the respiratory tract. Some asthmatics or hypersensitive individuals may experience difficult breathing.

**Eyes:** Causes serious eye irritation.

**Skin:** Harmful in contact with skin. Causes skin irritation. May cause an allergic skin reaction.

**Ingestion:** Harmful if swallowed. Some asthmatics or sulfite-sensitive individuals may experience wheezing, chest tightness, stomach upset, hives, faintness, weakness and diarrhea.

## Acute Toxicity Data:

Oral LD50 (rat): 500 - 5,000 mg/kg

- Skin irritation: moderate

## Data for Sodium carbonate, monohydrate (CAS 5968-11-6):

### Acute Toxicity Data:

Oral LD50: 1,600 - 3,200 mg/kg

- Skin irritation: slight

## Data for Sodium sulphite (CAS 7757-83-7):

### Acute Toxicity Data:

Oral LD50 (rat): 820 mg/kg

- Inhalation LC50 (rat): > 22 mg/l / 1 hr
- Skin irritation: none
- Eye irritation: slight; washing palliative

## Data for Hydroquinone (CAS 123-31-9):

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### Acute Toxicity Data:

Oral LD50 (male rat): 400 mg/kg

- Oral LD50 (male mouse): 100 - 200 mg/kg
- Dermal LD50 (guinea pig): > 1,000 mg/kg
- Dermal absorption rate: 1.1 micrograms (s) / cm<sup>2</sup> / hour
- Skin irritation: slight
- Skin Sensitization (guinea pig): positive
- Eye irritation: moderate

### Mutagenicity/Genotoxicity Data:

- Salmonella typhimurium assay (Ames test): negative (in presence and absence of activation)
- Chromosomal aberration assay: negative (in absence of activation)
- Chromosomal aberration assay: positive (in presence of activation)
- Sister chromatid exchange (SCE) assay: positive (in presence and absence of activation)

Definitions for the following section(s): LOEL =lowest-observed-effect level, LOAEL = lowest-observed-adverse-effect, NOAEL = no observed-adverse-effect level, NOEL =no-observed-effect level.

### Repeated dose toxicity:

- Dermal (17-day, rat): NOEL; 3800 mg/kg/day
- Dermal (17-day): Lowest observable effect level; 4800 mg/kg/day

### Developmental Toxicity Data:

- Oral (female rabbit): NOEL for developmental toxicity; 25mg/kg/day
- Oral (female rat): NOAEL for developmental toxicity; mg/kg/day

### Data for Bis(4-hydroxy-N-methylanilinium) sulphate (CAS 55-55-0):

#### Acute Toxicity Data:

Oral LD50 (rat): 237 mg/kg

- Oral LD50 (mouse): 565 mg/kg
- Dermal LD50 (guinea pig): > 1,000 mg/kg (highest dose tested)
- Skin irritation: slight
- Skin irritation: slight to moderate (repeated skin application)
- Skin Sensitization: positive
- Eye irritation (unwashed eyes): moderate to strong
- Eye irritation (washed eyes): slight

Definitions for the following section(s): LOEL =lowest-observed-effect level, LOAEL = lowest-observed-adverse-effect, NOAEL = no observed-adverse-effect level, NOEL =no-observed-effect level.

### Repeated dose toxicity:

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- Oral (11 days): Lowest observable effect level; 1.0 % in diet (reduced feed intake, reduced body weight gain, target organ effects: red blood cell)
- Oral (11 days): NOEL; 0.1 % in diet

### Data for Polyphosphoric acids, sodium salts (CAS 68915-31-1):

### Data for Potassium bromide (CAS 7758-02-3):

#### Acute Toxicity Data:

Oral LD50 (rat): > 1,600 mg/kg

- Skin irritation: none

### Data for Boric anhydride (CAS 1303-86-2):

#### Acute Toxicity Data:

- Dermal LD50 (rabbit): > 2,000 mg/kg
- Skin irritation: none
- Eye irritation: mild

## 12. Ecological information

The following properties are ESTIMATED from the components of the preparations.

### Potential Toxicity:

Toxicity to fish (LC50): 1 - 10 mg/l

Toxicity to daphnia (EC50): Daphnia: 1 - 10 mg/l

**Persistence and degradability:** Not readily biodegradable.

### Bioaccumulative potential

No data available

### Mobility in soil

No information available.

## 13. Disposal considerations

Discharge, treatment, or disposal may be subject to federal, state, commonwealth, provincial, or local laws. Since emptied containers retain product residue, follow label warnings even after container is emptied.

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### 14. Transport information

The information given below is provided to assist in documentation. It may supplement the information on the package. The package in your possession may carry a different version of the label depending on the date of manufacture. Depending on inner packaging quantities and packaging instructions, it may be subject to specific regulatory exceptions. Please consult the product packaging for further details.

<b>IATA:</b>	UN number:	UN3077
	Proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (hydroquinone, Bis(4-hydroxy-N-methylanilinium) sulphate)
	Class:	9
	Packaging group:	III
<b>IMDG:</b>	Marine Pollutant(s):	hydroquinone, Bis(4-hydroxy-N-methylanilinium) sulphate
	UN number:	UN3077
	Proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (hydroquinone, Bis(4-hydroxy-N-methylanilinium) sulphate)
	Class:	9
<b>US DOT:</b>	Packaging group:	III
	Marine Pollutant status:	Marine pollutant
	Marine Pollutant(s):	hydroquinone, Bis(4-hydroxy-N-methylanilinium) sulphate
	UN number:	UN3077
	Proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (hydroquinone, Bis(4-hydroxy-N-methylanilinium) sulphate)
	Class:	9
	Packaging group:	III
	Marine Pollutant status:	Marine pollutant
	Marine Pollutant(s):	hydroquinone, Bis(4-hydroxy-N-methylanilinium) sulphate

For more transportation information, go to: [www.kodak.com/go/ship](http://www.kodak.com/go/ship).

### 15. Regulatory information

#### Notification status

##### Regulatory List

##### Notification status

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TSCA	Not all listed
DSL	Not all listed
NDSL	None listed
EINECS	Not all listed
ELINCS	None listed
NLP	None listed
AICS	All listed
IECS	All listed
ENCS	Not all listed
ECI	Not all listed
NZIoC	All listed
PICCS	All listed

"Not all listed" indicates one or more component is either not on the public Inventory or is subject to exemption requirements. If additional information is needed contact Kodak.

### Other regulations

American Conference of Governmental Industrial Hygienists (ACGIH):	A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans: Hydroquinone
International Agency for Research on Cancer (IARC):	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
U.S. National Toxicology Program (NTP):	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
U.S. Occupational Safety and Health Administration (OSHA):	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
California Prop. 65	This product does not contain any chemicals known to State of California to cause cancer, birth

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	defects, or any other reproductive harm.
U.S. - CERCLA/SARA (40 CFR § 302.4 Designation of hazardous substances):	Hydroquinone
U.S. - CERCLA/SARA - Section 302 (40 CFR § 355 Appendices A and B - The List of Extremely Hazardous Substances and Their Threshold Planning Quantities):	Hydroquinone
U.S. - CERCLA/SARA - Section 313 (40 CFR § 372.65 Toxic Chemical Release Reporting):	Hydroquinone
U.S. - California - 8 CCR Section 339 - Director's List of Hazardous Substances:	Hydroquinone
U.S. - California - 8 CCR Section 5200-5220 - Specifically Regulated Carcinogens:	No components found on the California Specifically Regulated Carcinogens List.
U.S. - California - 8 CCR Section 5203 Carcinogens:	No components found on the California Section 5203 Carcinogens List.
U.S. - California - 8 CCR Section 5209 Carcinogens:	No components found on the California Section 5209 Carcinogens List.
U.S. - Massachusetts - General Law Chapter 111F (MGL c 111F) - Hazardous Substances Disclosure by Employers (a.k.a. Right to Know Law):	Hydroquinone
U.S. - Minnesota Employee Right-to-Know (5206.0400, Subpart 5. List of Hazardous Substances):	Hydroquinone
U.S. - New Jersey - Worker and Community Right to Know Act (N.J.S.A. 34:5A-1):	Hydroquinone
U.S. - Pennsylvania - Part XIII. Worker and Community Right-to-Know Act (Chapter 323 Hazardous Substance List, Appendix A):	Sodium carbonate, monohydrate , Sodium sulphite , Hydroquinone

### 16. Other information

The data below reflects current legislative requirements whereas the product in your possession may carry a different version of the label depending on the date of manufacture.

#### US/Canadian Label Statements:

#### KODAK DEKTOL Developer (Single Powder)

#### Contains:

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Polyphosphoric acids, sodium salts (68915-31-1), Sodium carbonate, monohydrate (5968-11-6), Sodium sulphite (7757-83-7), Hydroquinone (123-31-9), Bis(4-hydroxy-N-methylanilinium) sulphate (55-55-0)

### Symbol(s):



**Signal word:** Warning

**Hazard statements:** Harmful if swallowed. Harmful in contact with skin. Causes skin irritation. Causes serious eye irritation. May cause an allergic skin reaction. May cause damage to organs. (Kidney.) May cause damage to organs through prolonged or repeated exposure. (Kidney, Blood.)

### Precautionary statements:

**Prevention:** Wear protective gloves/ protective clothing/ eye protection/ face protection. Do not breathe dust/ fume/ gas/ mist/ vapours/ spray. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product.

**Response:** IF exposed or if you feel unwell: Call a POISON CENTER or doctor/ physician. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/ attention. IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/ attention. Take off contaminated clothing and wash before reuse. IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth.

**Storage:** Store in a well-ventilated place. Keep cool.

**Disposal:** Dispose of contents/container in accordance with local/regional/national/international regulation.

**FIRST AID:** If inhaled, remove to fresh air. Get medical attention if symptoms occur. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/ attention. IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/ attention. Take off contaminated clothing and wash before reuse. IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth. **Note to Physicians:** Absorption of this material into the body leads to the formation of methemoglobin that, in sufficient concentration, causes cyanosis. Since reversion of methemoglobin to hemoglobin occurs spontaneously after termination of exposure, moderate degrees of cyanosis need to be treated only by supportive measures such as bed rest and oxygen inhalation. Thorough cleansing of

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the entire contaminated area of the body, including scalp and nails, is of utmost importance. If cyanosis is severe, intravenous injection of methylene blue, one milligram per kilogram of body weight, may be of value. Keep out of reach of children. Do not handle or use until safety precautions in Material Safety Data Sheet (MSDS) have been read and understood. Since emptied containers retain product residue, follow label warnings even after container is emptied. **IN CASE OF FIRE:** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. **IN CASE OF SPILL:** Shovel into suitable container for disposal. Avoid dust formation. Clean surface thoroughly to remove residual contamination.

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The information contained herein is furnished without warranty of any kind. Users should consider these data only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use and disposal of these materials and the safety and health of employees and customers and the protection of the environment. The information relating to the working solution is for guidance purposes only, and is based on correct mixing and use of the product according to instructions.

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R-2, S-2, F-0, C-0

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**Kodak alaris**

## 1. Identification of the substance/mixture and of the company/undertaking

**Product name:** KODAK DEKTOL Developer (Single Powder), Working Solution

**Product code:** 1464734 - Working Solution

**Synonyms:** None.

**Relevant identified uses of the substance or mixture and uses advised against:**

**Identified uses:** photographic processing chemical (developer/activator). For industrial use only.

**Supplier:** Kodak Alaris Inc., 2400 Mount Read Boulevard, Rochester, NY 14615

IN EMERGENCY, telephone: 1-800-424-9300 or +1 703-527-3887.

For further information about this product, email [EHS-Questions@Kodakalaris.com](mailto:EHS-Questions@Kodakalaris.com).

## 2. Hazards identification

**Classification of the chemical in accordance with paragraph (d) of 29 CFR 1910.1200:**

Hazard class	Hazard category	Route of exposure
Skin sensitisation	Category 1	--

### GHS-Labeling

**Contains:**

Hydroquinone (123-31-9), Bis(4-hydroxy-N-methylanilinium) sulphate (55-55-0)

**Symbol(s):**



**Signal word:** Warning

**Hazard statements:** May cause an allergic skin reaction.

**Precautionary statements:**

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**Prevention:** Wear protective gloves. Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. Contaminated work clothing should not be allowed out of the workplace.

**Response:** IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/ attention. Take off contaminated clothing and wash it before reuse.

**Storage:** Store in a well-ventilated place. Keep cool.

**Disposal:** Dispose of contents/container in accordance with local/regional/national/international regulation.

**HMIS III Hazard Ratings:** Health - 2, Flammability - 0, Physical Hazard - 0

**NFPA Hazard Ratings:** Health - 3, Flammability - 0, Instability - 0

NOTE: HMIS III and NFPA 704 (2007) hazard indexes involve data review and interpretation that may vary among companies. They are intended only for rapid, general identification of the magnitude of the potential hazards. To adequately address safe handling, ALL information in this MSDS must be considered.

## 3. Composition/information on ingredients

Weight percent	Components - (CAS-No.)
1 - 5	Sodium sulphite (7757-83-7)
0.1 - < 1	Hydroquinone (123-31-9)
0.1 - < 1	Bis(4-hydroxy-N-methylanilinium) sulphate (55-55-0)

## 4. First aid measures

**Inhalation:** If inhaled, remove to fresh air. Get medical attention if symptoms occur.

**Eyes:** Any material that contacts the eye should be washed out immediately with water. Get medical attention if symptoms occur. If easy to do, remove contact lens, if worn.

**Skin:** IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/ attention. Take off contaminated clothing and wash before reuse.

**Ingestion:** Get medical attention if symptoms occur.

**Most important symptoms and effects, both acute and delayed:** No information available.

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## Indication of any immediate medical attention and special treatment needed:

**Treatment:** No information available.

## 5. Firefighting measures

**Extinguishing Media:** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

### Special hazards arising from the substance or mixture

**Hazardous Combustion Products:** None (noncombustible)

**Special Fire-Fighting Procedures:** None (noncombustible)

**Unusual Fire and Explosion Hazards:** None.

## 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures:** Refer to protective measures listed in sections 7 and 8.

**Methods and materials for containment and cleaning up:** Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination.

**Environmental precautions:** No information available.

## 7. Handling and storage

### Precautions for safe handling

**Personal precautions:** Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. Avoid contact with eyes, skin, and clothing. Use only with adequate ventilation. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product.

**Prevention of Fire and Explosion:** No special technical protective measures required.

**Conditions for safe storage, including any incompatibilities:** Keep container tightly closed. Keep away from incompatible substances (see Incompatibility section.)

## 8. Exposure controls/personal protection

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## Occupational exposure controls

Chemical Name	Regulatory List	Value Type	Value
Hydroquinone	ACGIH	time weighted average	1 mg/m3
Hydroquinone	OSHA	time weighted average	2 mg/m3

**Appropriate engineering controls:** Good general ventilation should be used. Ventilation should be sufficient so that applicable occupational exposure limits are not exceeded. Ventilation rates should be matched to conditions. Supplementary local exhaust ventilation, closed systems, or respiratory protection may be needed in special circumstances.

## Individual protection measures, such as personal protective equipment

**Eye protection:** Wear safety glasses with side shields (or goggles).

**Hand protection:** Wear protective gloves.

**Respiratory protection:** None should be needed. If engineering controls do not maintain airborne concentrations below recommended exposure limits, an approved respirator must be worn. If respirators are used, a program should be instituted to assure compliance with applicable federal, state, commonwealth, provincial, or local laws and regulations.

## 9. Physical and chemical properties

**Physical form:** liquid

**Colour:** light yellow

**Odour:** odourless

**Specific gravity:** 1.04 - 1.06

**Vapour pressure:** 24 mbar (18.0 mm Hg)

**Vapour density:** 0.6

**Boiling point/boiling range:** > 100 °C (> 212.0 °F)

**Melting point/range:** not applicable

**Water solubility:** complete

**pH:** 10.2 - 10.4

**Flash point:** does not flash

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**Evaporation rate:** No data available

**Flammability (Solid; gas):** No data available

**Upper explosion limit:** No data available

**Lower explosion limit:** No data available

**Partition coefficient: n-octanol/water:** No data available

**Auto-ignition temperature:** No data available

**Decomposition temperature:** No data available

**Viscosity:** No data available

**Explosive properties:** No data available

**Oxidizing properties:** No data available

## 10. Stability and reactivity

**Reactivity:** No data available

**Chemical stability:** Stable under normal conditions.

**Possibility of hazardous reactions:** Hazardous polymerisation does not occur.

**Conditions to avoid:** No data available

**Incompatible materials:** Acids. Contact with strong acids liberates sulphur dioxide.

**Hazardous decomposition products:** Sulphur oxides

## 11. Toxicological information

### Effects of Exposure

#### General advice:

Contains: Hydroquinone. There is insufficient evidence for classifying hydroquinone as a suspected carcinogenic or mutagenic substance in humans. No increases in cancer rates were observed in an epidemiology study which looked at mortality among more than 800 persons

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employed primarily in the manufacture of hydroquinone. Carcinogenicity studies in animals were inconclusive. Rats and mice were given hydroquinone by stomach tube or at high concentrations in the diet. Responses were not consistent across route of exposure, species or sex. The International Agency for Research on Cancer (IARC) has classified hydroquinone in Group 3, i.e., "not classifiable" as a carcinogen. Hydroquinone is generally negative in bacterial mutagenicity tests; there is evidence for the clastogenicity (chromosome breakage) of hydroquinone in vivo and in vitro. The relevance of chromosomal effects in test animals in predicting human risk is unclear.

Contains: Bis(4-hydroxy-N-methylanilinium) sulphate. Based on animal data, may cause adverse effects on the following organs/systems: blood, kidney, spleen. Based on animal data this material can produce methemoglobin which, in sufficient concentration, causes cyanosis, a blue-gray discoloration of the skin and lips caused by a reduced ability of the blood to carry oxygen.

**Inhalation:** Expected to be a low hazard for recommended handling.

**Eyes:** No specific hazard known. May cause transient irritation.

**Skin:** May cause an allergic skin reaction.

**Ingestion:** Expected to be a low ingestion hazard.

## Data for Sodium sulphite (CAS 7757-83-7):

### Acute Toxicity Data:

Oral LD50 (rat): 820 mg/kg

- Inhalation LC50 (rat): > 22 mg/l / 1 hr
- Skin irritation: none
- Eye irritation: slight; washing palliative

## Data for Hydroquinone (CAS 123-31-9):

### Acute Toxicity Data:

Oral LD50 (male rat): 400 mg/kg

- Oral LD50 (male mouse): 100 - 200 mg/kg
- Dermal LD50 (guinea pig): > 1,000 mg/kg
- Dermal absorption rate: 1.1 micrograms (s) / cm<sup>2</sup> / hour
- Skin irritation: slight
- Skin Sensitization (guinea pig): positive
- Eye irritation: moderate

### Mutagenicity/Genotoxicity Data:

- Salmonella typhimurium assay (Ames test): negative (in presence and absence of activation)
- Chromosomal aberration assay: negative (in absence of activation)
- Chromosomal aberration assay: positive (in presence of activation)

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- Sister chromatid exchange (SCE) assay: positive (in presence and absence of activation)

Definitions for the following section(s): LOEL =lowest-observed-effect level, LOAEL = lowest-observed-adverse-effect, NOAEL = no observed-adverse-effect level, NOEL =no-observed-effect level.

## Repeated dose toxicity:

- Dermal (17-day, rat): NOEL; 3800 mg/kg/day
- Dermal (17-day): Lowest observable effect level; 4800 mg/kg/day

## Developmental Toxicity Data:

- Oral (female rabbit): NOEL for developmental toxicity; 25mg/kg/day
- Oral (female rat): NOAEL for developmental toxicity; mg/kg/day

## Data for Bis(4-hydroxy-N-methylanilinium) sulphate (CAS 55-55-0):

### Acute Toxicity Data:

Oral LD50 (rat): 237 mg/kg

- Oral LD50 (mouse): 565 mg/kg
- Dermal LD50 (guinea pig): > 1,000 mg/kg (highest dose tested)
- Skin irritation: slight
- Skin irritation: slight to moderate (repeated skin application)
- Skin Sensitization: positive
- Eye irritation (unwashed eyes): moderate to strong
- Eye irritation (washed eyes): slight

Definitions for the following section(s): LOEL =lowest-observed-effect level, LOAEL = lowest-observed-adverse-effect, NOAEL = no observed-adverse-effect level, NOEL =no-observed-effect level.

## Repeated dose toxicity:

- Oral (11 days): Lowest observable effect level; 1.0 % in diet (reduced feed intake, reduced body weight gain, target organ effects: red blood cell)
- Oral (11 days): NOEL; 0.1 % in diet

## Carcinogenicity

American Conference of Governmental Industrial Hygienists (ACGIH):

A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans: Hydroquinone

International Agency for Research on Cancer (IARC):

No component of this product present at levels greater than or equal to 0.1% is identified as probable,

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	possible or confirmed human carcinogen by IARC.
U.S. National Toxicology Program (NTP):	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
U.S. Occupational Safety and Health Administration (OSHA):	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
California Prop. 65	WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

### 12. Ecological information

The following properties are ESTIMATED from the components of the preparations.

#### Potential Toxicity:

Toxicity to fish (LC50): 1 - 10 mg/l

Toxicity to daphnia (EC50): 1 - 10 mg/l

**Persistence and degradability:** Readily biodegradable.

#### Bioaccumulative potential

No data available

#### Mobility in soil

No information available.

### 13. Disposal considerations

Discharge, treatment, or disposal may be subject to federal, state, commonwealth, provincial, or local laws. Since emptied containers retain product residue, follow label warnings even after container is emptied.

### 14. Transport information

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Not regulated for all modes of transportation.

For more transportation information, go to: [www.kodak.com/go/ship](http://www.kodak.com/go/ship).

### 15. Regulatory information

#### Notification status

Regulatory List	Notification status
TSCA	Not all listed
DSL	Not all listed
NDSL	None listed
EINECS	Not all listed
ELINCS	None listed
NLP	None listed
AICS	All listed
IECS	All listed
ENCS	Not all listed
ECI	Not all listed
NZIoC	All listed
PICCS	All listed

"Not all listed" indicates one or more component is either not on the public Inventory or is subject to exemption requirements. If additional information is needed contact Kodak.

#### Other regulations

U.S. - CERCLA/SARA (40 CFR § 302.4 Designation of hazardous substances):	Hydroquinone
U.S. - CERCLA/SARA - Section 302 (40 CFR § 355 Appendices A and B - The List of Extremely Hazardous Substances and Their Threshold Planning Quantities):	Hydroquinone
U.S. - CERCLA/SARA - Section 313 (40 CFR § 372.65 Toxic Chemical Release Reporting):	Hydroquinone
U.S. - California - 8 CCR Section 339 - Director's List of Hazardous Substances:	No components found on the California Director's List of Hazardous Substances.

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U.S. - California - 8 CCR Section 5200-5220 - Specifically Regulated Carcinogens:	No components found on the California Specifically Regulated Carcinogens List.
U.S. - California - 8 CCR Section 5203 Carcinogens:	No components found on the California Section 5203 Carcinogens List.
U.S. - California - 8 CCR Section 5209 Carcinogens:	No components found on the California Section 5209 Carcinogens List.
U.S. - Massachusetts - General Law Chapter 111F (MGL c 111F) - Hazardous Substances Disclosure by Employers (a.k.a. Right to Know Law):	No components regulated under the Massachusetts Hazardous Substances Disclosure by Employers Law.
U.S. - Minnesota Employee Right-to-Know (5206.0400, Subpart 5. List of Hazardous Substances):	No components found on the Minnesota Employee Right-to-Know List of Hazardous Substances.
U.S. - New Jersey - Worker and Community Right to Know Act (N.J.S.A. 34:5A-1):	No components regulated under the New Jersey Worker and Community Right-to-Know Act.
U.S. - Pennsylvania - Part XIII. Worker and Community Right-to-Know Act (Chapter 323 Hazardous Substance List, Appendix A):	Water , Sodium carbonate, monohydrate , Hydroquinone

### 16. Other information

The data below reflects current legislative requirements whereas the product in your possession may carry a different version of the label depending on the date of manufacture.

#### US/Canadian Label Statements:

#### KODAK DEKTOL Developer (Single Powder), Working Solution

##### Contains:

Hydroquinone (123-31-9), Bis(4-hydroxy-N-methylanilinium) sulphate (55-55-0)

##### Symbol(s):

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**Signal word:** Warning

**Hazard statements:** May cause an allergic skin reaction.

**Precautionary statements:**

**Prevention:** Wear protective gloves. Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. Contaminated work clothing should not be allowed out of the workplace.

**Response:** IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/ attention. Take off contaminated clothing and wash it before reuse.

**Storage:** Store in a well-ventilated place. Keep cool.

**Disposal:** Dispose of contents/container in accordance with local/regional/national/international regulation.

**FIRST AID:** If inhaled, remove to fresh air. Get medical attention if symptoms occur. Any material that contacts the eye should be washed out immediately with water. Get medical attention if symptoms occur. If easy to do, remove contact lens, if worn. IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/ attention. Take off contaminated clothing and wash before reuse. Get medical attention if symptoms occur. Keep out of reach of children. Do not handle or use until safety precautions in Material Safety Data Sheet (MSDS) have been read and understood. Since emptied containers retain product residue, follow label warnings even after container is emptied. **IN CASE OF FIRE:** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. **IN CASE OF SPILL:** Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination.

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The information contained herein is furnished without warranty of any kind. Users should consider these data only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use and disposal of these materials and the safety and health of employees and customers and the protection of the environment. The information relating to the working solution is for guidance purposes only, and is based on correct mixing and use of the product according to instructions.

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R-1, S-2, F-0, C-0

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**Kodak** alaris

## 1. Identification of the substance/mixture and of the company/undertaking

**Product name:** Indicator Stop Bath

**Product code:** 5160346

**Synonyms:** PCD 2838

**Relevant identified uses of the substance or mixture and uses advised against:**

**Identified uses:** photographic processing chemical. For consumer and industrial use.

**Supplier:** Kodak Alaris Inc., 2400 Mount Read Boulevard, Rochester, NY 14615

IN EMERGENCY, telephone: 1-800-424-9300 or +1 703-527-3887.

For further information about this product, email [EHS-Questions@Kodakalaris.com](mailto:EHS-Questions@Kodakalaris.com).

## 2. Hazards identification

**Classification of the chemical in accordance with paragraph (d) of 29 CFR 1910.1200:**

Hazard class	Hazard category	Route of exposure
Flammable liquids	Category 3	--
Corrosive to metals	Category 1	--
Acute toxicity	Category 4	Inhalation
Acute toxicity	Category 4	Dermal
Skin corrosion	Category 1	--
Serious eye damage	Category 1	--
Respiratory sensitisation	Category 1	--

### GHS-Labeling

**Contains:**

Acetic acid (64-19-7)

**Symbol(s):**

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**Signal word:** Danger

**Hazard statements:**

Flammable liquid and vapour. May be corrosive to metals. Harmful if inhaled. Harmful in contact with skin. Causes severe skin burns and eye damage. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

**Hazard statements:**

**Precautionary statements:**

**Prevention:** Keep container tightly closed. Keep only in original container. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Ground/bond container and receiving equipment. Use explosion-proof electrical/ ventilating/ lighting/ equipment. Take precautionary measures against static discharge. Use only non-sparking tools. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection. In case of inadequate ventilation wear respiratory protection. Do not breathe dust/ fume/ gas/ mist/ vapours/ spray. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product.

**Response:** In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction. Absorb spillage to prevent material damage. Call a POISON CENTER or doctor/ physician. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/ physician. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower. Wash contaminated clothing before reuse. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

**Storage:** Store in corrosive resistant container with resistant inliner. Store in a well-ventilated place. Keep container tightly closed.

**Disposal:** Dispose of contents/container in accordance with local/regional/national/international regulation.

**HMIS III Hazard Ratings:** Health - 3, Flammability - 2, Physical Hazard - 0

**NFPA Hazard Ratings:** Health - 3, Flammability - 2, Instability - 0

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NOTE: HMIS III and NFPA 704 (2007) hazard indexes involve data review and interpretation that may vary among companies. They are intended only for rapid, general identification of the magnitude of the potential hazards. To adequately address safe handling, ALL information in this MSDS must be considered.

## 3. Composition/information on ingredients

Weight percent	Components - (CAS-No.)
85 - 90	Acetic acid (64-19-7)

## 4. First aid measures

**Inhalation:** IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/ physician.

**Eyes:** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician.

**Skin:** IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower. Wash contaminated clothing before re-use. Immediately call a POISON CENTER or doctor/ physician.

**Ingestion:** IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/ physician.

**Most important symptoms and effects, both acute and delayed:** No information available.

**Indication of any immediate medical attention and special treatment needed:**

**Treatment:** No information available.

## 5. Firefighting measures

**Extinguishing Media:** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Special hazards arising from the substance or mixture**

**Hazardous Combustion Products:** Carbon oxides

**Special Fire-Fighting Procedures:** Use water spray to cool unopened containers. Wear self-contained breathing apparatus and protective clothing.

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**Unusual Fire and Explosion Hazards:** Combustible Material contains a combustible solvent that may accumulate in the container headspace.

## 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures:** Refer to protective measures listed in sections 7 and 8.

**Methods and materials for containment and cleaning up:** Remove all sources of ignition. Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination.

**Environmental precautions:** No information available.

## 7. Handling and storage

### Precautions for safe handling

**Personal precautions:** Do not breathe mist or vapour at concentrations greater than the exposure limits. Do not get in eyes, on skin, or on clothing. Keep container tightly closed. Use only with adequate ventilation. Wash thoroughly after handling. Do not eat, drink or smoke when using this product.

**Prevention of Fire and Explosion:** Keep away from heat and sources of ignition. Keep from contact with oxidizing materials. Use only with adequate ventilation.

**Conditions for safe storage, including any incompatibilities:** Keep container tightly closed. Keep away from incompatible substances (see Incompatibility section.)

## 8. Exposure controls/personal protection

### Occupational exposure controls

Chemical Name	Regulatory List	Value Type	Value
Acetic acid	ACGIH	Time weighted average	10 ppm
Acetic acid		Short term exposure limit	15 ppm
	OSHA	Time weighted average	10 ppm 25 mg/m3

**Appropriate engineering controls:** Use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. Controls should be sufficient so that applicable occupational exposure limits are not exceeded.

**Individual protection measures, such as personal protective equipment**

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**Eye protection:** Wear eye/face protection.

**Hand protection:** Wear protective gloves.

**Respiratory protection:** If engineering controls do not maintain airborne concentrations below recommended exposure limits, an approved respirator must be worn. Respirator type: full-face organic vapour cartridge. If respirators are used, a program should be instituted to assure compliance with applicable federal, state, commonwealth, provincial, or local laws and regulations.

## 9. Physical and chemical properties

**Physical form:** liquid

**Colour:** light yellow

**Odour:** sharp vinegar

**Specific gravity:** 1.07

**Vapour pressure:** 19.5 mbar (14.6 mm Hg)

**Vapour density:** 1.9

**Boiling point/boiling range:** 100.0 °C (212.0 °F)

**Water solubility:** complete

**pH:** 2

**Flash point:** 53.3 °C (127.9 °F)

**Evaporation rate:** No data available

**Flammability (Solid; gas):** No data available

**Upper explosion limit:** No data available

**Lower explosion limit:** No data available

**Partition coefficient: n-octanol/water:** No data available

**Auto-ignition temperature:** No data available

**Decomposition temperature:** No data available

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**Viscosity:** No data available

**Explosive properties:** No data available

**Oxidizing properties:** No data available

## 10. Stability and reactivity

**Reactivity:** No data available

**Chemical stability:** Stable under normal conditions.

**Possibility of hazardous reactions:** Hazardous polymerisation does not occur.

**Conditions to avoid:** No data available

**Incompatible materials:** Strong oxidizing agents, Bases, Amines, Metals.

**Hazardous decomposition products:** None under normal conditions of use.

## 11. Toxicological information

### Effects of Exposure

#### General advice:

Contains: Acetic acid. Acute overexposure to extremely high airborne concentrations of respiratory irritants has been associated with development of an asthma-like reactive airways syndrome (RADS) in susceptible individuals. Extremely high airborne concentrations are not generated during normal conditions of use but may occur following a spill. The potential to generate extremely high airborne concentrations in a spill situation depends upon physical factors such as the concentration of the solution, the volume of the spill, the surface area of the spill, the size of the room where the spill occurred, and the ventilation rate in the room.

**Inhalation:** May cause allergy or asthma symptoms or breathing difficulties if inhaled. Harmful if inhaled.

**Eyes:** Causes serious eye damage.

**Skin:** Causes severe skin burns. Harmful in contact with skin.

**Ingestion:** May cause burns of the gastrointestinal tract if swallowed. May be harmful if swallowed.

**Data for Acetic acid (CAS 64-19-7):**

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### Acute Toxicity Data:

Oral LD50 (Rat): 3,320 mg/kg

- Oral LD50 (Rat): 3,310 mg/kg
- Inhalation LC50 (Rat): 11.4 mg/l / 4 hr
- Dermal LD50 (Rabbit): 1,060 mg/kg
- Skin irritation: severe
- Eye irritation (washed eyes): severe
- Eye irritation (unwashed eyes): severe

### Carcinogenicity

American Conference of Governmental Industrial Hygienists (ACGIH):	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
International Agency for Research on Cancer (IARC):	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
U.S. National Toxicology Program (NTP):	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
U.S. Occupational Safety and Health Administration (OSHA):	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
California Prop. 65	This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

## 12. Ecological information

The following properties are ESTIMATED from the components of the preparations.

### Potential Toxicity:

Toxicity to fish (LC50): 10 - 100 mg/l

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Toxicity to daphnia (EC50): 10 - 100 mg/l

**Persistence and degradability:** Readily biodegradable

### Bioaccumulative potential

No data available

### Mobility in soil

No information available.

## 13. Disposal considerations

Discharge, treatment, or disposal may be subject to federal, state, commonwealth, provincial, or local laws. Since emptied containers retain product residue, follow label warnings even after container is emptied.

## 14. Transport information

The information below is provided to assist in documentation. It represents the dangerous goods classification before any regulatory exceptions are taken (e.g. "limited quantity") and therefore may not represent the final classification. The final classification as it pertains to the product packaging configuration (including labeling, marking, and exceptions) may be obtained via the Dangerous Goods Worksheet which can be found at [www.kodak.com/go/ship](http://www.kodak.com/go/ship).

**IATA:** UN number: UN2789

Proper shipping name: ACETIC ACID SOLUTION  
Class: 8  
Sub-risks: 3  
Packaging group: II

**IMDG:** UN number: UN2789

Proper shipping name: ACETIC ACID SOLUTION  
Class: 8  
Sub-risks: 3  
Packaging group: II

**US DOT:** UN number: UN2789

Proper shipping name: ACETIC ACID SOLUTION  
Class: 8  
Sub-risks: 3  
Packaging group: II

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For more transportation information, go to: [www.kodak.com/go/ship](http://www.kodak.com/go/ship).

### 15. Regulatory information

#### Notification status

Regulatory List	Notification status
TSCA	All listed
DSL	All listed
NDSL	None listed
EINECS	All listed
ELINCS	None listed
NLP	None listed
AICS	All listed
IECS	All listed
ENCS	All listed
ECI	Not all listed
NZIoC	All listed
PICCS	All listed

"Not all listed" indicates one or more component is either not on the public Inventory or is subject to exemption requirements. If additional information is needed contact Kodak.

#### Other regulations

U.S. - CERCLA/SARA (40 CFR § 302.4 Designation of hazardous substances):	Acetic acid
U.S. - CERCLA/SARA - Section 302 (40 CFR § 355 Appendices A and B - The List of Extremely Hazardous Substances and Their Threshold Planning Quantities):	No components of this product are subject to the SARA Section 302 (40 CFR 355) reporting requirements.
U.S. - CERCLA/SARA - Section 313 (40 CFR § 372.65 Toxic Chemical Release Reporting):	No components of this product are subject to the SARA Section 313 (40 CFR 372.65) reporting requirements.
U.S. - California - 8 CCR Section 339 - Director's List of Hazardous Substances:	Acetic acid

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U.S. - California - 8 CCR Section 5200-5220 - Specifically Regulated Carcinogens:	No components found on the California Specifically Regulated Carcinogens List.
U.S. - California - 8 CCR Section 5203 Carcinogens:	No components found on the California Section 5203 Carcinogens List.
U.S. - California - 8 CCR Section 5209 Carcinogens:	No components found on the California Section 5209 Carcinogens List.
U.S. - Massachusetts - General Law Chapter 111F (MGL c 111F) - Hazardous Substances Disclosure by Employers (a.k.a. Right to Know Law):	Acetic acid
U.S. - Minnesota Employee Right-to-Know (5206.0400, Subpart 5. List of Hazardous Substances):	Acetic acid
U.S. - New Jersey - Worker and Community Right to Know Act (N.J.S.A. 34:5A-1):	Acetic acid
U.S. - Pennsylvania - Part XIII. Worker and Community Right-to-Know Act (Chapter 323 Hazardous Substance List, Appendix A):	Acetic acid , Water

### 16. Other information

The data below reflects current legislative requirements whereas the product in your possession may carry a different version of the label depending on the date of manufacture.

#### US/Canadian Label Statements:

##### Indicator Stop Bath

##### Contains:

Acetic acid (64-19-7)

##### Symbol(s):



**Signal word:** Danger

**Hazard statements:**

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Flammable liquid and vapour. May be corrosive to metals. Harmful if inhaled. Harmful in contact with skin. Causes severe skin burns and eye damage. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

### **Hazard statements:**

### **Precautionary statements:**

**Prevention:** Keep container tightly closed. Keep only in original container. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Ground/bond container and receiving equipment. Use explosion-proof electrical/ ventilating/ lighting/ equipment. Take precautionary measures against static discharge. Use only non-sparking tools. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection. In case of inadequate ventilation wear respiratory protection. Do not breathe dust/ fume/ gas/ mist/ vapours/ spray. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product.

**Response:** In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction. Absorb spillage to prevent material damage. Call a POISON CENTER or doctor/ physician. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/ physician. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower. Wash contaminated clothing before reuse. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

**Storage:** Store in corrosive resistant container with resistant inliner. Store in a well-ventilated place. Keep container tightly closed.

**Disposal:** Dispose of contents/container in accordance with local/regional/national/international regulation.

**FIRST AID:** IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/ physician. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician. IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower. Wash contaminated clothing before re-use. Immediately call a POISON CENTER or doctor/ physician. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/ physician. Keep out of reach of children. Do not handle or use until safety precautions in Material Safety Data Sheet (MSDS) have been read and understood. Since emptied containers retain product residue, follow label warnings even after container is emptied. **IN CASE OF FIRE:** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. **IN CASE OF SPILL:** Remove all sources of ignition. Absorb spill with vermiculite or other inert

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material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination.

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The information contained herein is furnished without warranty of any kind. Users should consider these data only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use and disposal of these materials and the safety and health of employees and customers and the protection of the environment. The information relating to the working solution is for guidance purposes only, and is based on correct mixing and use of the product according to instructions.

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R-2, S-3, F-2, C-0

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### 1. Identification of the substance/mixture and of the company/undertaking

**Product name:** KODAK T-MAX Developer

**Product code:** 5050851

**Synonyms:** PCD 5337

**Relevant identified uses of the substance or mixture and uses advised against:**

**Identified uses:** photographic processing chemical (developer/activator). For industrial use only.

**Supplier:** Kodak Alaris Inc., 2400 Mount Read Boulevard, Rochester, NY 14615

IN EMERGENCY, telephone: 1-800-424-9300 or +1 703-527-3887.

For further information about this product, email [EHS-Questions@Kodakalaris.com](mailto:EHS-Questions@Kodakalaris.com).

### 2. Hazards identification

**Classification of the chemical in accordance with paragraph (d) of 29 CFR 1910.1200:**

Hazard class	Hazard category	Route of exposure
Acute toxicity	Category 4	Inhalation - Vapours
Acute toxicity	Category 4	Oral
Skin corrosion	Category 2	--
Serious eye damage	Category 1	--
Skin sensitisation	Category 1	--
Carcinogenicity	Category 2	--
Reproductive toxicity	Category 2	--
Specific target organ toxicity - single exposure	Category 2	--
Specific target organ toxicity - single exposure	Category 1	--

#### GHS-Labeling

**Contains:**

Diethanolamine (111-42-2), Sulphur dioxide (7446-09-5), Sodium bisulphite (7631-90-5), Hydroquinone (123-31-9), 4-hydroxymethyl-4-methyl-1-phenyl-3-pyrazolidinone (13047-13-7)

**Symbol(s):**

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**Signal word:** Danger

**Hazard statements:** Harmful if inhaled. Harmful if swallowed. Causes skin irritation. Causes serious eye damage. May cause an allergic skin reaction. Suspected of causing cancer. Suspected of damaging fertility or the unborn child. May cause damage to organs. (Kidney, Liver, Blood, Testes.) Causes damage to organs. (Respiratory system.)

**Precautionary statements:**

**Prevention:** Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/ eye protection/ face protection. Use personal protective equipment as required. Do not breathe dust/ fume/ gas/ mist/ vapours/ spray. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Contaminated work clothing should not be allowed out of the workplace.

**Response:** Immediately call a POISON CENTER or doctor/ physician. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash before reuse. Rinse mouth.

**Storage:** Store in a well-ventilated place. Keep container tightly closed.

**Disposal:** Dispose of contents/container in accordance with local/regional/national/international regulation.

**HMIS III Hazard Ratings:** Health - 2\*, Flammability - 1, Physical Hazard - 0

**NFPA Hazard Ratings:** Health - 3, Flammability - 1, Instability - 0

NOTE: HMIS III and NFPA 704 (2007) hazard indexes involve data review and interpretation that may vary among companies. They are intended only for rapid, general identification of the magnitude of the potential hazards. To adequately address safe handling, ALL information in this MSDS must be considered.

<b>3. Composition/information on ingredients</b>
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Weight percent	Components - (CAS-No.)
35 - 45	Water (7732-18-5)
30 - 35	Diethanolamine (111-42-2)
15 - 20	Sulphur dioxide (7446-09-5)
1 - 5	Sodium bisulphite (7631-90-5)
1 - 5	Hydroquinone (123-31-9)
0.1 - < 1	4-hydroxymethyl-4-methyl-1-phenyl-3-pyrazolidinone (13047-13-7)

## 4. First aid measures

**Inhalation:** If inhaled, remove to fresh air. Get medical attention.

**Eyes:** In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lens, if worn. Get medical attention.

**Skin:** In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention if symptoms occur. Wash contaminated clothing before re-use. Destroy or thoroughly clean contaminated shoes.

**Ingestion:** If swallowed, DO NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a physician or poison control centre immediately.

**Most important symptoms and effects, both acute and delayed:** No information available.

**Indication of any immediate medical attention and special treatment needed:**

**Treatment:** No information available.

## 5. Firefighting measures

**Extinguishing Media:** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Special hazards arising from the substance or mixture**

**Hazardous Combustion Products:** Carbon oxides, Nitrogen oxides (NOx), Sulphur oxides, (see also Hazardous Decomposition Products sections.)

**Special Fire-Fighting Procedures:** Wear self-contained breathing apparatus and protective clothing. Fire or excessive heat may produce hazardous decomposition products.

**Unusual Fire and Explosion Hazards:** None.

## 6. Accidental release measures

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**Personal precautions, protective equipment and emergency procedures:** Refer to protective measures listed in sections 7 and 8.

**Methods and materials for containment and cleaning up:** Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination.

**Environmental precautions:** No information available.

## 7. Handling and storage

### Precautions for safe handling

**Personal precautions:** Do not breathe mist or vapour at concentrations greater than the exposure limits. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Use only with adequate ventilation. Wash thoroughly after handling. Do not eat, drink or smoke when using this product.

**Prevention of Fire and Explosion:** Keep from contact with oxidizing materials.

**Conditions for safe storage, including any incompatibilities:** Keep container tightly closed. Keep away from incompatible substances (see Incompatibility section.)

## 8. Exposure controls/personal protection

### Occupational exposure controls

Chemical Name	Regulatory List	Value Type	Value
Diethanolamine	ACGIH	time weighted average	1 mg/m3
		<i>Form of exposure: inhalable fraction and vapor</i>	
		<i>Skin - potential significant contribution to overall exposure by the cutaneous route</i>	
Sulphur dioxide	OSHA	Short term exposure limit	0.25 ppm
	OSHA	time weighted average	5 ppm
Sodium bisulphite	ACGIH	time weighted average	13 mg/m3
	ACGIH	time weighted average	5 mg/m3
Hydroquinone	OSHA	time weighted average	1 mg/m3
	OSHA	time weighted average	2 mg/m3

**Appropriate engineering controls:** Use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. Controls should be sufficient so that applicable occupational exposure limits are not exceeded.

### Individual protection measures, such as personal protective equipment

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**Eye protection:** Wear safety glasses with side shields (or goggles).

**Hand protection:** Wear impervious gloves and protective clothing appropriate for the risk of exposure.

**Respiratory protection:** If engineering controls do not maintain airborne concentrations below recommended exposure limits, an approved respirator must be worn. Respirator type: organic vapour. A respirator should be worn if hazardous decomposition products are likely to be or have been released. Respirator type: acid gas If respirators are used, a program should be instituted to assure compliance with applicable federal, state, commonwealth, provincial, or local laws and regulations.

## 9. Physical and chemical properties

**Physical form:** liquid

**Colour:** clear

**Odour:** amine

**Specific gravity:** 1.22 - 1.23

**Vapour pressure:** 24 mbar (18.0 mm Hg)

**Vapour density:** 0.6

**Boiling point/boiling range:** > 100 °C (> 212.0 °F) (estimated)

**Water solubility:** complete

**pH:** 8.3 - 8.8

**Flash point:** does not flash

**Evaporation rate:** No data available

**Flammability (Solid; gas):** No data available

**Upper explosion limit:** No data available

**Lower explosion limit:** No data available

**Partition coefficient: n-octanol/water:** No data available

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**Auto-ignition temperature:** No data available

**Decomposition temperature:** No data available

**Viscosity:** No data available

**Explosive properties:** No data available

**Oxidizing properties:** No data available

## 10. Stability and reactivity

**Reactivity:** No data available

**Chemical stability:** Stable under normal conditions.

**Possibility of hazardous reactions:** Hazardous polymerisation does not occur.

**Conditions to avoid:** No data available

**Incompatible materials:** Strong oxidizing agents, Strong acids. Contact with strong acids liberates sulphur dioxide.

**Hazardous decomposition products:** Sulphur oxides, Nitrogen oxides (NO<sub>x</sub>)

## 11. Toxicological information

### Effects of Exposure

#### General advice:

Contains: Diethanolamine. Based on animal data, may cause adverse effects on the following organs/systems: kidney, liver, blood, nervous system, testes.

Contains: Hydroquinone. There is insufficient evidence for classifying hydroquinone as a suspected carcinogenic or mutagenic substance in humans. No increases in cancer rates were observed in an epidemiology study which looked at mortality among more than 800 persons employed primarily in the manufacture of hydroquinone. Carcinogenicity studies in animals were inconclusive. Rats and mice were given hydroquinone by stomach tube or at high concentrations in the diet. Responses were not consistent across route of exposure, species or sex. The International Agency for Research on Cancer (IARC) has classified hydroquinone in Group 3, i.e., "not classifiable" as a carcinogen. Hydroquinone is generally negative in bacterial mutagenicity tests; there is evidence for the clastogenicity (chromosome breakage) of hydroquinone in vivo and in vitro. The relevance of chromosomal effects in test animals in

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predicting human risk is unclear.

Contains: 4-hydroxymethyl-4-methyl-1-phenyl-3-pyrazolidinone. May cause adverse reproductive effects such as infertility based on animal data. Based on repeated-dose ingestion studies in animals, this chemical may cause blood, testicular, and adverse reproductive effects.

**Inhalation:** Harmful if inhaled. In contact with strong acids or if heated, sulphites may liberate sulphur dioxide gas. Sulphur dioxide gas is irritating to the respiratory tract. Some asthmatics or hypersensitive individuals may experience difficult breathing.

**Eyes:** Causes serious eye damage.

**Skin:** Causes skin irritation. May cause an allergic skin reaction.

**Ingestion:** Harmful if swallowed. Some asthmatics or sulfite-sensitive individuals may experience wheezing, chest tightness, stomach upset, hives, faintness, weakness and diarrhea.

## Data for Diethanolamine (CAS 111-42-2):

### Acute Toxicity Data:

Oral LD50 (rat): 1,410 mg/kg

- Dermal LD50 (rabbit): 12,983.88 mg/kg
- Skin irritation: strong
- Eye irritation: Corrosive

Definitions for the following section(s): LOEL =lowest-observed-effect level, LOAEL = lowest-observed-adverse-effect, NOAEL = no observed-adverse-effect level, NOEL =no-observed-effect level.

### Repeated dose toxicity:

- Inhalation (, dog): NOAEL; 0.6 ppm
- Inhalation (30-day, guinea pig): NOAEL; 0.6 ppm
- Feeding study (, male rat): Lowest observable effect level; 0.01 % in diet (target organ effects: liver)
- Feeding study (30-day, male rat): Lowest observable effect level; 0.1 % in diet
- Inhalation (, male rat): NOEL; 0.6 ppm

## Data for Sodium bisulphite (CAS 7631-90-5):

### Acute Toxicity Data:

Oral LD50 (rat): > 1,600 mg/kg

- Dermal LD50 (rat): 2,000 mg/kg
- Eye irritation (May irritate eyes.): mild

## Data for Hydroquinone (CAS 123-31-9):

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### Acute Toxicity Data:

Oral LD50 (male rat): 400 mg/kg

- Oral LD50 (male mouse): 100 - 200 mg/kg
- Dermal LD50 (guinea pig): > 1,000 mg/kg
- Dermal absorption rate: 1.1 micrograms (s) / cm<sup>2</sup> / hour
- Skin irritation: slight
- Skin Sensitization (guinea pig): positive
- Eye irritation: moderate

### Mutagenicity/Genotoxicity Data:

- Salmonella typhimurium assay (Ames test): negative (in presence and absence of activation)
- Chromosomal aberration assay: negative (in absence of activation)
- Chromosomal aberration assay: positive (in presence of activation)
- Sister chromatid exchange (SCE) assay: positive (in presence and absence of activation)

Definitions for the following section(s): LOEL =lowest-observed-effect level, LOAEL = lowest-observed-adverse-effect, NOAEL = no observed-adverse-effect level, NOEL =no-observed-effect level.

### Repeated dose toxicity:

- Dermal (17-day, rat): NOEL; 3800 mg/kg/day
- Dermal (17-day): Lowest observable effect level; 4800 mg/kg/day

### Developmental Toxicity Data:

- Oral (female rabbit): NOEL for developmental toxicity; 25mg/kg/day
- Oral (female rat): NOAEL for developmental toxicity; mg/kg/day

### Data for 4-hydroxymethyl-4-methyl-1-phenyl-3-pyrazolidinone (CAS 13047-13-7):

#### Acute Toxicity Data:

Oral LD50 (rat): 566 mg/kg

- Dermal LD50: > 1,000 mg/kg
- Skin irritation: slight
- Skin irritation: slight exacerbation (repeated skin application)
- Skin Sensitization: slight
- Eye irritation (unwashed eyes): strong
- Eye irritation (washed eyes): slight to moderate

Definitions for the following section(s): LOEL =lowest-observed-effect level, LOAEL = lowest-observed-adverse-effect, NOAEL = no observed-adverse-effect level, NOEL =no-observed-effect level.

#### Repeated dose toxicity:

- Oral (12-day, rat): NOEL; 88 mg/kg/day

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- Oral (12-day, rat): Lowest observable effect level; 440 mg/kg/day (target organ effects: blood, target organ effects: testes)
- Oral (28-day, rat): NOEL; 10 mg/kg/day
- Oral (28-day, rat): Lowest observable effect level; 40 mg/kg/day (target organ effects: blood, target organ effects: testes)

### 12. Ecological information

The following properties are ESTIMATED from the components of the preparations.

#### Potential Toxicity:

Toxicity to fish (LC50): 1 - 10 mg/l

Toxicity to daphnia (EC50): 1 - 10 mg/l

**Persistence and degradability:** Readily biodegradable.

#### Bioaccumulative potential

No data available

#### Mobility in soil

No information available.

### 13. Disposal considerations

Discharge, treatment, or disposal may be subject to federal, state, commonwealth, provincial, or local laws. Since emptied containers retain product residue, follow label warnings even after container is emptied.

### 14. Transport information

Not regulated for all modes of transportation.

For more transportation information, go to: [www.kodak.com/go/ship](http://www.kodak.com/go/ship).

### 15. Regulatory information

#### Notification status

Regulatory List

Notification status

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TSCA	All listed
DSL	All listed
NDSL	None listed
EINECS	All listed
ELINCS	None listed
NLP	None listed
AICS	All listed
IECS	All listed
ENCS	All listed
ECI	All listed
NZIoC	All listed
PICCS	All listed

"Not all listed" indicates one or more component is either not on the public Inventory or is subject to exemption requirements. If additional information is needed contact Kodak.

### Other regulations

American Conference of Governmental Industrial Hygienists (ACGIH):	A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans: Diethanolamine , Hydroquinone
International Agency for Research on Cancer (IARC):	Group 2B - Possibly Carcinogenic to Humans: Diethanolamine
U.S. National Toxicology Program (NTP):	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
U.S. Occupational Safety and Health Administration (OSHA):	OSHA Carcinogen or Potential Carcinogen: Diethanolamine
California Prop. 65	WARNING! This product contains a chemical known to the State of California to cause cancer.  WARNING: This product contains a chemical known to the State of California to cause birth defects or

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	other reproductive harm.
U.S. - CERCLA/SARA (40 CFR § 302.4 Designation of hazardous substances):	Diethanolamine , Sodium bisulphite , Hydroquinone
U.S. - CERCLA/SARA - Section 302 (40 CFR § 355 Appendices A and B - The List of Extremely Hazardous Substances and Their Threshold Planning Quantities):	Sulphur dioxide , Hydroquinone
U.S. - CERCLA/SARA - Section 313 (40 CFR § 372.65 Toxic Chemical Release Reporting):	Diethanolamine , Hydroquinone
U.S. - California - 8 CCR Section 339 - Director's List of Hazardous Substances:	Diethanolamine , Sulphur dioxide , Sodium bisulphite , Hydroquinone
U.S. - California - 8 CCR Section 5200-5220 - Specifically Regulated Carcinogens:	No components found on the California Specifically Regulated Carcinogens List.
U.S. - California - 8 CCR Section 5203 Carcinogens:	No components found on the California Section 5203 Carcinogens List.
U.S. - California - 8 CCR Section 5209 Carcinogens:	No components found on the California Section 5209 Carcinogens List.
U.S. - Massachusetts - General Law Chapter 111F (MGL c 111F) - Hazardous Substances Disclosure by Employers (a.k.a. Right to Know Law):	Diethanolamine , Sulphur dioxide , Sodium bisulphite , Hydroquinone
U.S. - Minnesota Employee Right-to-Know (5206.0400, Subpart 5. List of Hazardous Substances):	Diethanolamine , Sulphur dioxide , Sodium bisulphite , Hydroquinone
U.S. - New Jersey - Worker and Community Right to Know Act (N.J.S.A. 34:5A-1):	Diethanolamine , Sulphur dioxide , Sodium bisulphite , Hydroquinone
U.S. - Pennsylvania - Part XIII. Worker and Community Right-to-Know Act (Chapter 323 Hazardous Substance List, Appendix A):	Water , Diethanolamine , Sulphur dioxide , Sodium bisulphite , Hydroquinone

### 16. Other information

The data below reflects current legislative requirements whereas the product in your possession may carry a different version of the label depending on the date of manufacture.

#### US/Canadian Label Statements:

#### KODAK T-MAX Developer

#### Contains:

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Diethanolamine (111-42-2), Sulphur dioxide (7446-09-5), Sodium bisulphite (7631-90-5), Hydroquinone (123-31-9), 4-hydroxymethyl-4-methyl-1-phenyl-3-pyrazolidinone (13047-13-7)

### Symbol(s):



**Signal word:** Danger

**Hazard statements:** Harmful if inhaled. Harmful if swallowed. Causes skin irritation. Causes serious eye damage. May cause an allergic skin reaction. Suspected of causing cancer. Suspected of damaging fertility or the unborn child. May cause damage to organs. (Kidney, Liver, Blood, Testes.) Causes damage to organs. (Respiratory system.)

### Precautionary statements:

**Prevention:** Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/ eye protection/ face protection. Use personal protective equipment as required. Do not breathe dust/ fume/ gas/ mist/ vapours/ spray. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Contaminated work clothing should not be allowed out of the workplace.

**Response:** Immediately call a POISON CENTER or doctor/ physician. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash before reuse. Rinse mouth.

**Storage:** Store in a well-ventilated place. Keep container tightly closed.

**Disposal:** Dispose of contents/container in accordance with local/regional/national/international regulation.

**FIRST AID:** If inhaled, remove to fresh air. Get medical attention. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lens, if worn. Get medical attention. In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention if symptoms occur. Wash contaminated clothing before re-use. Destroy or thoroughly clean contaminated shoes. If swallowed, DO NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a physician or poison control centre immediately. Keep out of reach of children. Do not handle or use until safety precautions in Material Safety Data Sheet (MSDS) have been read and understood. Since emptied containers retain product residue, follow label warnings even after container is emptied. **IN CASE OF FIRE:** Use water

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spray, alcohol-resistant foam, dry chemical or carbon dioxide. **IN CASE OF SPILL:** Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination. Additional Components Include: Water (7732-18-5) .

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The information contained herein is furnished without warranty of any kind. Users should consider these data only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use and disposal of these materials and the safety and health of employees and customers and the protection of the environment. The information relating to the working solution is for guidance purposes only, and is based on correct mixing and use of the product according to instructions.

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R-2, S-2, F-1, C-0

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## 1. Identification of the substance/mixture and of the company/undertaking

**Product name:** D76 Developer

**Product code:** 5160304

**Synonyms:** PCD 5239

**Relevant identified uses of the substance or mixture and uses advised against:**

**Identified uses:** photographic processing chemical (developer/activator). For industrial use only.

**Supplier:** Kodak Alaris Inc., 2400 Mount Read Boulevard, Rochester, NY 14615

IN EMERGENCY, telephone: 1-800-424-9300 or +1 703-527-3887.

For further information about this product, email [EHS-Questions@Kodakalaris.com](mailto:EHS-Questions@Kodakalaris.com).

## 2. Hazards identification

**Classification of the chemical in accordance with paragraph (d) of 29 CFR 1910.1200:**

Hazard class	Hazard category	Route of exposure
Acute toxicity	Category 4	Oral
Serious eye damage	Category 1	--
Skin sensitisation	Category 1	--
Germ cell mutagenicity	Category 2	--
Carcinogenicity	Category 2	--
Specific target organ toxicity - repeated exposure	Category 2	--
Acute aquatic toxicity	Category 1	--

### GHS-Labeling

**Contains:**

Sodium sulphite (7757-83-7), Hydroquinone (123-31-9), Bis(4-hydroxy-N-methylanilinium) sulphate (55-55-0)

**Symbol(s):**

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**Signal word:** Danger

**Hazard statements:** Harmful if swallowed. Causes serious eye damage. May cause an allergic skin reaction. Suspected of causing genetic defects. Suspected of causing cancer. May cause damage to organs through prolonged or repeated exposure. (Red blood cells, Kidney.) Very toxic to aquatic life.

**Precautionary statements:**

**Prevention:** Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust/ fume/ gas/ mist/ vapours/ spray. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves/ protective clothing/ eye protection/ face protection. Avoid release to the environment.

**Response:** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician. IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth. IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/ attention. Specific treatment (see supplemental first aid instructions on this label). Take off contaminated clothing and wash it before reuse. IF exposed or concerned: Get medical advice/ attention. Collect spillage.

**Storage:** Store locked up.

**Disposal:** Dispose of contents/container in accordance with local/regional/national/international regulation.

**HMIS III Hazard Ratings:** Health - 3\*, Flammability - 0, Physical Hazard - 0

**NFPA Hazard Ratings:** Health - 3, Flammability - 0, Instability - 0

NOTE: HMIS III and NFPA 704 (2007) hazard indexes involve data review and interpretation that may vary among companies. They are intended only for rapid, general identification of the magnitude of the potential hazards. To adequately address safe handling, ALL information in this MSDS must be considered.

<b>3. Composition/information on ingredients</b>
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Weight percent	Components - (CAS-No.)
85 - 90	Sodium sulphite (7757-83-7)
1 - 5	Hydroquinone (123-31-9)
1 - 5	Bis(4-hydroxy-N-methylanilinium) sulphate (55-55-0)

## 4. First aid measures

**Inhalation:** If inhaled, remove to fresh air. Get medical attention immediately.

**Eyes:** Immediately flush the contaminated eye(s) with water for at least 60 minutes, while holding the eyelid(s) open. If a contact lens is present, DO NOT delay irrigation or attempt to remove the lens. Neutral saline solution may be used as soon as it is available. DO NOT INTERRUPT FLUSHING. Contact a physician or poison control center immediately. Continue flushing the eye(s) until the physician advises to stop. If necessary, continue flushing during transport to an emergency care facility.

**Skin:** Wash off immediately with soap and plenty of water. Get medical attention if symptoms occur. Remove contaminated clothing and shoes. Wash contaminated clothing before re-use. Destroy or thoroughly clean contaminated shoes.

**Ingestion:** If swallowed, only induce vomiting as directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention.

**Most important symptoms and effects, both acute and delayed:** No information available.

### Indication of any immediate medical attention and special treatment needed:

**Treatment:** Absorption of this material into the body leads to the formation of methemoglobin that, in sufficient concentration, causes cyanosis. Since reversion of methemoglobin to hemoglobin occurs spontaneously after termination of exposure, moderate degrees of cyanosis need to be treated only by supportive measures such as bed rest and oxygen inhalation. Thorough cleansing of the entire contaminated area of the body, including scalp and nails, is of utmost importance. If cyanosis is severe, intravenous injection of methylene blue, one milligram per kilogram of body weight, may be of value.

## 5. Firefighting measures

**Extinguishing Media:** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment..

### Special hazards arising from the substance or mixture

**Hazardous Combustion Products:** None (noncombustible)

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**Special Fire-Fighting Procedures:** Wear self-contained breathing apparatus and protective suit. Fire or excessive heat may produce hazardous decomposition products.

**Unusual Fire and Explosion Hazards:** None.

## 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures:** Refer to protective measures listed in sections 7 and 8.

**Methods and materials for containment and cleaning up:** Shovel into suitable container for disposal. Clean surface thoroughly to remove residual contamination. Prevent runoff from entering drains, sewers, or streams.

**Environmental precautions:** No information available.

## 7. Handling and storage

### Precautions for safe handling

**Personal precautions:** Avoid contact with eyes, skin, and clothing. Avoid breathing dust. Use only with adequate ventilation. Wash thoroughly after handling. Do not eat, drink or smoke when using this product.

**Prevention of Fire and Explosion:** Keep from contact with oxidizing materials.

**Ventilation:** Match ventilation rates to conditions of use so as not to exceed any applicable exposure limits (see Section 8).

**Conditions for safe storage, including any incompatibilities:** Keep in a dry, cool and well-ventilated place. Cool conditions (5 - 30°C). Keep container tightly closed. Keep away from food, drink and animal feeding stuffs. Keep away from incompatible substances (see Incompatibility section.)

## 8. Exposure controls/personal protection

### Occupational exposure controls

Chemical Name	Regulatory List	Value Type	Value
Hydroquinone	ACGIH	Time weighted average	1 mg/m3
Hydroquinone	OSHA	Time weighted average	2 mg/m3

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**Appropriate engineering controls:** Use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. Controls should be sufficient so that applicable occupational exposure limits are not exceeded.

## Individual protection measures, such as personal protective equipment

**Eye protection:** Wear safety glasses with side shields (or goggles) and a face shield.

**Hand protection:** Wear protective gloves/ protective clothing.

**Respiratory protection:** If engineering controls do not maintain airborne concentrations below recommended exposure limits, an approved respirator must be worn. If respirators are used, a program should be instituted to assure compliance with applicable federal, state, commonwealth, provincial, or local laws and regulations.

## 9. Physical and chemical properties

**Physical form:** solid (powder)

**Colour:** off-white

**Odour:** odourless

**Specific gravity:** No data available

**Vapour pressure:** negligible

**Vapour density:** Not applicable

**Melting point/range:** No data available

**Water solubility:** appreciable

**pH:** Not applicable

**Flash point:** Not applicable

**Evaporation rate:** No data available

**Flammability (Solid; gas):** No data available

**Upper explosion limit:** No data available

**Lower explosion limit:** No data available

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**Partition coefficient: n-octanol/water:** No data available

**Auto-ignition temperature:** No data available

**Decomposition temperature:** No data available

**Viscosity:** No data available

**Explosive properties:** No data available

**Oxidizing properties:** No data available

### 10. Stability and reactivity

**Reactivity:** No data available

**Chemical stability:** Stable under normal conditions.

**Possibility of hazardous reactions:** Hazardous polymerisation does not occur.

**Conditions to avoid:** No data available

**Incompatible materials:** Acids. Contact with strong acids liberates sulphur dioxide.

**Hazardous decomposition products:** Sulphur oxides

### 11. Toxicological information

#### Effects of Exposure

##### General advice:

Contains: Sodium sulphite. In contact with strong acids or if heated, sulphites may liberate sulphur dioxide gas. Sulphur dioxide gas is irritating to the respiratory tract. Some asthmatics or hypersensitive individuals may experience difficult breathing.

Contains: Hydroquinone. Suspected of causing cancer. Suspected of causing genetic defects.

Contains: Bis(4-hydroxy-N-methylanilinium) sulphate. May cause kidney damage based on animal data. May cause blood disorders based on animal data. Based on animal data this material can produce methemoglobin which, in sufficient concentration, causes cyanosis, a blue-gray discoloration of the skin and lips caused by a reduced ability of the blood to carry oxygen.

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**Inhalation:** Airborne dust/mist/vapor may be irritating. In contact with strong acids or if heated, sulphites may liberate sulphur dioxide gas. Sulphur dioxide gas is irritating to the respiratory tract. Some asthmatics or hypersensitive individuals may experience difficult breathing.

**Eyes:** Causes serious eye damage.

**Skin:** May cause an allergic skin reaction.

**Ingestion:** Harmful if swallowed. May cause irritation of the gastrointestinal tract if swallowed. Some asthmatics or sulfite-sensitive individuals may experience wheezing, chest tightness, stomach upset, hives, faintness, weakness and diarrhea.

## Data for Sodium sulphite (CAS 7757-83-7):

### Acute Toxicity Data:

Oral LD50 (Rat): 820 mg/kg

- Inhalation LC50 (Rat): > 22 mg/l / 1 hr
- Skin irritation: none
- Eye irritation: slight; washing palliative

## Data for Hydroquinone (CAS 123-31-9):

### Acute Toxicity Data:

Oral LD50 (male Rat): 400 mg/kg

- Oral LD50 (male Mouse): 100 - 200 mg/kg
- Oral LD50 (Rat): 298 mg/kg
- Dermal LD50 (Guinea pig): > 1,000 mg/kg
- Dermal LD50 (Rabbit): 74,800 mg/kg
- Skin irritation: slight
- Skin Sensitization (Guinea pig): positive
- Eye irritation: moderate

### Mutagenicity/Genotoxicity Data:

- Salmonella typhimurium assay (Ames test): negative (in presence and absence of activation)
- Chromosomal aberration assay: negative (in absence of activation)
- Chromosomal aberration assay: positive (in presence of activation)
- Sister chromatid exchange (SCE) assay: positive (in presence and absence of activation)

Definitions for the following section(s): LOEL =lowest-observed-effect level, LOAEL = lowest-observed-adverse-effect, NOAEL = no observed-adverse-effect level, NOEL =no-observed-effect level.

### Repeated dose toxicity:

- Dermal (17-day, Rat): NOEL; 3800 mg/kg/day
- Dermal (17-day): Lowest observed effect level; 4800 mg/kg/day

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## Developmental Toxicity Data:

- Oral (female Rabbit): NOEL for developmental toxicity; 25mg/kg/day
- Oral (female Rat): NOAEL for developmental toxicity; mg/kg/day

## Data for Bis(4-hydroxy-N-methylanilinium) sulphate (CAS 55-55-0):

### Acute Toxicity Data:

Oral LD50 (Rat): 237 mg/kg

- Oral LD50 (Mouse): 565 mg/kg
- Dermal LD50 (Guinea pig): > 1,000 mg/kg (highest dose tested)
- Skin irritation: slight
- Skin irritation: slight to moderate (repeated skin application)
- Skin Sensitization: positive
- Eye irritation (unwashed eyes): moderate to strong
- Eye irritation (washed eyes): slight

Definitions for the following section(s): LOEL =lowest-observed-effect level, LOAEL = lowest-observed-adverse-effect, NOAEL = no observed-adverse-effect level, NOEL =no-observed-effect level.

### Repeated dose toxicity:

- Oral (11 days): Lowest observed effect level; 1.0 % in diet (reduced feed intake, reduced body weight gain, target organ effects: red blood cell)
- Oral (11 days): NOEL; 0.1 % in diet

## Carcinogenicity

American Conference of Governmental Industrial Hygienists (ACGIH):	A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans: Hydroquinone
International Agency for Research on Cancer (IARC):	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
U.S. National Toxicology Program (NTP):	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
U.S. Occupational Safety and Health Administration (OSHA):	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen

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California Prop. 65

or potential carcinogen by OSHA.

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

## 12. Ecological information

The following properties are ESTIMATED from the components of the preparations.

### Potential Toxicity:

Toxicity to fish (LC50): < 1 mg/l estimated

Toxicity to daphnia (EC50): < 1 mg/l estimated

**Persistence and degradability:** Readily biodegradable

**Chemical Oxygen Demand (COD):** ca. 260 g/l

**Biochemical Oxygen Demand (BOD):** ca. 205 g/l

This product has not been tested for environmental effects.

### Bioaccumulative potential

No data available

### Mobility in soil

No information available.

## 13. Disposal considerations

Discharge, treatment, or disposal may be subject to federal, state, commonwealth, provincial, or local laws. Since emptied containers retain product residue, follow label warnings even after container is emptied.

## 14. Transport information

The information below is provided to assist in documentation. It represents the dangerous goods classification before any regulatory exceptions are taken (e.g. "limited quantity") and therefore may not represent the final classification. The final classification as it pertains to the product packaging

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configuration (including labeling, marking, and exceptions) may be obtained via the Dangerous Goods Worksheet which can be found at [www.kodak.com/go/ship](http://www.kodak.com/go/ship).

**IATA:** UN number: UN3077

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE,  
SOLID, N.O.S. (hydroquinone)

Class: 9

Packaging group: III

Marine Pollutant status: Marine pollutant

Marine Pollutant(s): hydroquinone

**IMDG:** UN number: UN3077

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE,  
SOLID, N.O.S. (hydroquinone)

Class: 9

Packaging group: III

Marine Pollutant status: Marine pollutant

**US DOT:** UN number: UN3077

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE,  
SOLID, N.O.S. (hydroquinone)

Class: 9

Packaging group: III

Marine Pollutant status: Marine pollutant

Marine Pollutant(s): hydroquinone

Reportable Quantity: hydroquinone

Reportable Quantity: 100 lb

For more transportation information, go to: [www.kodak.com/go/ship](http://www.kodak.com/go/ship).

### 15. Regulatory information

#### Notification status

Regulatory List	Notification status
TSCA	All listed
DSL	All listed
NDSL	None listed
EINECS	All listed
ELINCS	None listed
NLP	None listed

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AICS	All listed
IECS	All listed
ENCS	All listed
ECI	All listed
NZIoC	All listed
PICCS	All listed
TCSI	All listed

"Not all listed" indicates one or more component is either not on the public Inventory or is subject to exemption requirements. If additional information is needed contact Kodak.

### Other regulations

U.S. - CERCLA/SARA (40 CFR § 302.4 Designation of hazardous substances):	Hydroquinone
U.S. - CERCLA/SARA - Section 302 (40 CFR § 355 Appendices A and B - The List of Extremely Hazardous Substances and Their Threshold Planning Quantities):	Hydroquinone
U.S. - CERCLA/SARA - Section 313 (40 CFR § 372.65 Toxic Chemical Release Reporting):	Hydroquinone
U.S. - California - 8 CCR Section 339 - Director's List of Hazardous Substances:	Hydroquinone
U.S. - California - 8 CCR Section 5200-5220 - Specifically Regulated Carcinogens:	No components found on the California Specifically Regulated Carcinogens List.
U.S. - California - 8 CCR Section 5203 Carcinogens:	No components found on the California Section 5203 Carcinogens List.
U.S. - California - 8 CCR Section 5209 Carcinogens:	No components found on the California Section 5209 Carcinogens List.
U.S. - Massachusetts - General Law Chapter 111F (MGL c 111F) - Hazardous Substances Disclosure by Employers (a.k.a. Right to Know Law):	Hydroquinone
U.S. - Minnesota Employee Right-to-Know (5206.0400, Subpart 5. List of Hazardous Substances):	Hydroquinone
U.S. - New Jersey - Worker and Community Right to Know Act (N.J.S.A. 34:5A-1):	Hydroquinone

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U.S. - Pennsylvania - Part XIII. Worker and Community  
Right-to-Know Act (Chapter 323 Hazardous Substance  
List, Appendix A):

Sodium sulphite , Hydroquinone ,  
Water , Sodium hydroxide

## 16. Other information

The data below reflects current legislative requirements whereas the product in your possession may carry a different version of the label depending on the date of manufacture.

### US/Canadian Label Statements:

#### D76 Developer

##### Contains:

Sodium sulphite (7757-83-7), Hydroquinone (123-31-9), Bis(4-hydroxy-N-methylanilinium) sulphate (55-55-0)

##### Symbol(s):



**Signal word:** Danger

**Hazard statements:** Harmful if swallowed. Causes serious eye damage. May cause an allergic skin reaction. Suspected of causing genetic defects. Suspected of causing cancer. May cause damage to organs through prolonged or repeated exposure. (Red blood cells, Kidney.) Very toxic to aquatic life.

##### Precautionary statements:

**Prevention:** Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust/ fume/ gas/ mist/ vapours/ spray. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves/ protective clothing/ eye protection/ face protection. Avoid release to the environment.

**Response:** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician. IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth. IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/ attention. Specific treatment (see supplemental first aid instructions on this label).

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Take off contaminated clothing and wash it before reuse. IF exposed or concerned: Get medical advice/ attention. Collect spillage.

**Storage:** Store locked up.

**Disposal:** Dispose of contents/container in accordance with local/regional/national/international regulation.

**FIRST AID:** If inhaled, remove to fresh air. Get medical attention immediately. Immediately flush the contaminated eye(s) with water for at least 60 minutes, while holding the eyelid(s) open. If a contact lens is present, DO NOT delay irrigation or attempt to remove the lens. Neutral saline solution may be used as soon as it is available. DO NOT INTERRUPT FLUSHING. Contact a physician or poison control center immediately. Continue flushing the eye(s) until the physician advises to stop. If necessary, continue flushing during transport to an emergency care facility. Wash off immediately with soap and plenty of water. Get medical attention if symptoms occur. Remove contaminated clothing and shoes. Wash contaminated clothing before re-use. Destroy or thoroughly clean contaminated shoes. If swallowed, only induce vomiting as directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention. **Note to Physicians:** Absorption of this material into the body leads to the formation of methemoglobin that, in sufficient concentration, causes cyanosis. Since reversion of methemoglobin to hemoglobin occurs spontaneously after termination of exposure, moderate degrees of cyanosis need to be treated only by supportive measures such as bed rest and oxygen inhalation. Thorough cleansing of the entire contaminated area of the body, including scalp and nails, is of utmost importance. If cyanosis is severe, intravenous injection of methylene blue, one milligram per kilogram of body weight, may be of value. **IN CASE OF FIRE:** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.. **IN CASE OF SPILL:** Shovel into suitable container for disposal. Clean surface thoroughly to remove residual contamination. Prevent runoff from entering drains, sewers, or streams.

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The information contained herein is furnished without warranty of any kind. Users should consider these data only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use and disposal of these materials and the safety and health of employees and customers and the protection of the environment. The information relating to the working solution is for guidance purposes only, and is based on correct mixing and use of the product according to instructions.

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R-1, S-3, F-0, C-0 CARC

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**Kodak** alaris

## 1. Identification of the substance/mixture and of the company/undertaking

**Product name:** Hypo Clearing Agent

**Product code:** 5160338

**Synonyms:** PCD 0515

**Relevant identified uses of the substance or mixture and uses advised against:**

**Identified uses:** photographic processing chemical. For industrial use only.

**Supplier:** Kodak Alaris Inc., 2400 Mount Read Boulevard, Rochester, NY 14615

IN EMERGENCY, telephone: 1-800-424-9300 or +1 703-527-3887.

For further information about this product, email [EHS-Questions@Kodakalaris.com](mailto:EHS-Questions@Kodakalaris.com).

## 2. Hazards identification

**Classification of the chemical in accordance with paragraph (d) of 29 CFR 1910.1200:**

Hazard class	Hazard category	Route of exposure
Acute toxicity	Category 4	Oral
Acute toxicity	Category 4	Dermal
Serious eye damage/eye irritation	Category 2B	--

### GHS-Labeling

**Contains:**

Sodium sulphite (7757-83-7), Sodium metabisulphite (7681-57-4)

**Symbol(s):**



**Signal word:** Warning

**Hazard statements:** Harmful if swallowed. Harmful in contact with skin. Causes eye irritation.

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## Precautionary statements:

**Prevention:** Wear protective gloves/ protective clothing/ eye protection/ face protection. Wash thoroughly after handling. Do not eat, drink or smoke when using this product.

**Response:** Call a POISON CENTER or doctor/ physician if you feel unwell. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/ attention. IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse. IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth.

**Storage:** Store in a well-ventilated place. Keep cool.

**Disposal:** Dispose of contents/container in accordance with local/regional/national/international regulation.

**HMIS III Hazard Ratings:** Health - 2, Flammability - 0, Physical Hazard - 1

**NFPA Hazard Ratings:** Health - 3, Flammability - 0, Instability - 1

NOTE: HMIS III and NFPA 704 (2007) hazard indexes involve data review and interpretation that may vary among companies. They are intended only for rapid, general identification of the magnitude of the potential hazards. To adequately address safe handling, ALL information in this MSDS must be considered.

## 3. Composition/information on ingredients

Weight percent	Components - (CAS-No.)
75 - 80	Sodium sulphite (7757-83-7)
15 - 20	Sodium metabisulphite (7681-57-4)
1 - 5	Sodium citrate (6132-04-3)
1 - 5	Ethylenediaminetetraacetic acid tetrasodium salt (64-02-8)

## 4. First aid measures

**Inhalation:** If symptomatic, move to fresh air. Get medical attention if symptoms occur.

**Eyes:** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/ attention.

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**Skin:** IF ON SKIN: Wash with plenty of soap and water. Call a POISON CENTER or doctor/ physician if you feel unwell. Take off contaminated clothing and wash before reuse.

**Ingestion:** IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth.

**Most important symptoms and effects, both acute and delayed:** No information available.

**Indication of any immediate medical attention and special treatment needed:**

**Treatment:** No information available.

## 5. Firefighting measures

**Extinguishing Media:** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Special hazards arising from the substance or mixture**

**Hazardous Combustion Products:** None (noncombustible), (see also Hazardous Decomposition Products sections.)

**Special Fire-Fighting Procedures:** Wear self-contained breathing apparatus and protective clothing. Fire or excessive heat may produce hazardous decomposition products.

**Unusual Fire and Explosion Hazards:** Fire or high temperatures may cause decomposition.

## 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures:** Refer to protective measures listed in sections 7 and 8.

**Methods and materials for containment and cleaning up:** Shovel into suitable container for disposal. Clean surface thoroughly to remove residual contamination.

**Environmental precautions:** No information available.

## 7. Handling and storage

**Precautions for safe handling**

**Personal precautions:** Avoid breathing dust at concentrations greater than the exposure limits. Avoid contact with eyes, skin, and clothing. Use only with adequate ventilation. Wash thoroughly after handling. Do not eat, drink or smoke when using this product.

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**Prevention of Fire and Explosion:** Keep away from heat and sources of ignition.

**Conditions for safe storage, including any incompatibilities:** Keep container tightly closed. Keep away from incompatible substances (see Incompatibility section.)

## 8. Exposure controls/personal protection

### Occupational exposure controls

Chemical Name	Regulatory List	Value Type	Value
Sodium metabisulphite	ACGIH	time weighted average	5 mg/m3

**Appropriate engineering controls:** Good general ventilation should be used. Ventilation should be sufficient so that applicable occupational exposure limits are not exceeded. Ventilation rates should be matched to conditions. Supplementary local exhaust ventilation, closed systems, or respiratory protection may be needed in special circumstances.

### Individual protection measures, such as personal protective equipment

**Eye protection:** Wear eye/face protection.

**Hand protection:** Wear protective gloves.

**Respiratory protection:** If engineering controls do not maintain airborne concentrations below recommended exposure limits, an approved respirator must be worn. Respirator type: N95 Particulate Filter. A respirator should be worn if hazardous decomposition products are likely to be or have been released. Respirator type: acid gas See Stability and Reactivity Section. If respirators are used, a program should be instituted to assure compliance with applicable federal, state, commonwealth, provincial, or local laws and regulations.

## 9. Physical and chemical properties

**Physical form:** solid (powder or granules)

**Colour:** white

**Odour:** odourless

**Specific gravity:** > 1

**Vapour pressure:** not applicable

**Vapour density:** not applicable

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**Melting point/range:** No data available

**Water solubility:** appreciable

**pH:** not applicable

**Flash point:** not applicable

**Evaporation rate:** No data available

**Flammability (Solid; gas):** No data available

**Upper explosion limit:** No data available

**Lower explosion limit:** No data available

**Partition coefficient: n-octanol/water:** No data available

**Auto-ignition temperature:** No data available

**Decomposition temperature:** No data available

**Viscosity:** No data available

**Explosive properties:** No data available

**Oxidizing properties:** No data available

### 10. Stability and reactivity

**Reactivity:** No data available

**Chemical stability:** Not fully evaluated. Materials containing similar structural groups can decompose if heated.

**Possibility of hazardous reactions:** Hazardous polymerisation does not occur.

**Conditions to avoid:** No data available

**Incompatible materials:** Acids, Strong oxidizing agents. Contact with strong acids liberates sulphur dioxide.

**Hazardous decomposition products:** sulphur dioxide

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## 11. Toxicological information

### Effects of Exposure

#### General advice:

Contains: Sodium metabisulphite. In contact with strong acids or if heated, sulphites may liberate sulphur dioxide gas. Sulphur dioxide gas is irritating to the respiratory tract. Some asthmatics or hypersensitive individuals may experience difficult breathing.

**Inhalation:** Expected to be a low hazard for recommended handling. In contact with strong acids or if heated, sulphites may liberate sulphur dioxide gas. Sulphur dioxide gas is irritating to the respiratory tract. Some asthmatics or hypersensitive individuals may experience difficult breathing.

**Eyes:** Causes eye irritation.

**Skin:** Harmful in contact with skin.

**Ingestion:** Harmful if swallowed. Some asthmatics or sulfite-sensitive individuals may experience wheezing, chest tightness, stomach upset, hives, faintness, weakness and diarrhea.

#### Acute Toxicity Data:

Oral LD50 (rat): > 1,600 mg/kg

## 12. Ecological information

The following properties are ESTIMATED from the components of the preparations.

#### Potential Toxicity:

Toxicity to fish (LC50): > 100 mg/l

Toxicity to daphnia (EC50): > 100 mg/l

Toxicity to algae (IC50): > 100 mg/l

Toxicity to other organisms: > 100 mg/l

**Persistence and degradability:** Readily biodegradable.

**Chemical Oxygen Demand (COD):** ca. 150 g/l

**Biochemical Oxygen Demand (BOD):** ca. 135 g/l

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## Bioaccumulative potential

No data available

## Mobility in soil

No information available.

## 13. Disposal considerations

Discharge, treatment, or disposal may be subject to federal, state, commonwealth, provincial, or local laws. Since emptied containers retain product residue, follow label warnings even after container is emptied.

## 14. Transport information

Not regulated for all modes of transportation.

For more transportation information, go to: [www.kodak.com/go/ship](http://www.kodak.com/go/ship).

## 15. Regulatory information

### Notification status

Regulatory List	Notification status
TSCA	Not all listed
DSL	Not all listed
NDSL	None listed
EINECS	Not all listed
ELINCS	None listed
NLP	None listed
AICS	All listed
IECS	All listed
ENCS	Not all listed
ECI	Not all listed
NZIoC	All listed
PICCS	All listed

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"Not all listed" indicates one or more component is either not on the public Inventory or is subject to exemption requirements. If additional information is needed contact Kodak.

### Other regulations

American Conference of Governmental Industrial Hygienists (ACGIH):	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
International Agency for Research on Cancer (IARC):	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
U.S. National Toxicology Program (NTP):	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
U.S. Occupational Safety and Health Administration (OSHA):	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
California Prop. 65	This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.
U.S. - CERCLA/SARA (40 CFR § 302.4 Designation of hazardous substances):	No components of this product are subject to the SARA Section 302 (40 CFR 302.4) reporting requirements.
U.S. - CERCLA/SARA - Section 302 (40 CFR § 355 Appendices A and B - The List of Extremely Hazardous Substances and Their Threshold Planning Quantities):	No components of this product are subject to the SARA Section 302 (40 CFR 355) reporting requirements.
U.S. - CERCLA/SARA - Section 313 (40 CFR § 372.65 Toxic Chemical Release Reporting):	No components of this product are subject to the SARA Section 313 (40 CFR 372.65) reporting requirements.
U.S. - California - 8 CCR Section 339 - Director's List of	Sodium metabisulphite

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## Hazardous Substances:

U.S. - California - 8 CCR Section 5200-5220 - Specifically Regulated Carcinogens:	No components found on the California Specifically Regulated Carcinogens List.
U.S. - California - 8 CCR Section 5203 Carcinogens:	No components found on the California Section 5203 Carcinogens List.
U.S. - California - 8 CCR Section 5209 Carcinogens:	No components found on the California Section 5209 Carcinogens List.
U.S. - Massachusetts - General Law Chapter 111F (MGL c 111F) - Hazardous Substances Disclosure by Employers (a.k.a. Right to Know Law):	Sodium metabisulphite
U.S. - Minnesota Employee Right-to-Know (5206.0400, Subpart 5. List of Hazardous Substances):	Sodium metabisulphite
U.S. - New Jersey - Worker and Community Right to Know Act (N.J.S.A. 34:5A-1):	Sodium metabisulphite
U.S. - Pennsylvania - Part XIII. Worker and Community Right-to-Know Act (Chapter 323 Hazardous Substance List, Appendix A):	Sodium sulphite , Sodium metabisulphite , Sodium citrate

## 16. Other information

The data below reflects current legislative requirements whereas the product in your possession may carry a different version of the label depending on the date of manufacture.

### US/Canadian Label Statements:

#### Hypo Clearing Agent

##### Contains:

Sodium sulphite (7757-83-7), Sodium metabisulphite (7681-57-4)

##### Symbol(s):



**Signal word:** Warning

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**Hazard statements:** Harmful if swallowed. Harmful in contact with skin. Causes eye irritation.

**Precautionary statements:**

**Prevention:** Wear protective gloves/ protective clothing/ eye protection/ face protection. Wash thoroughly after handling. Do not eat, drink or smoke when using this product.

**Response:** Call a POISON CENTER or doctor/ physician if you feel unwell. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/ attention. IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse. IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth.

**Storage:** Store in a well-ventilated place. Keep cool.

**Disposal:** Dispose of contents/container in accordance with local/regional/national/international regulation.

**FIRST AID:** If symptomatic, move to fresh air. Get medical attention if symptoms occur. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/ attention. IF ON SKIN: Wash with plenty of soap and water. Call a POISON CENTER or doctor/ physician if you feel unwell. Take off contaminated clothing and wash before reuse. IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth. Keep out of reach of children. Do not handle or use until safety precautions in Material Safety Data Sheet (MSDS) have been read and understood. Since emptied containers retain product residue, follow label warnings even after container is emptied. **IN CASE OF FIRE:** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. **IN CASE OF SPILL:** Shovel into suitable container for disposal. Clean surface thoroughly to remove residual contamination. Additional Components Include: Sodium citrate (6132-04-3) , Ethylenediaminetetraacetic acid tetrasodium salt (64-02-8).

---

The information contained herein is furnished without warranty of any kind. Users should consider these data only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use and disposal of these materials and the safety and health of employees and customers and the protection of the environment. The information relating to the working solution is for guidance purposes only, and is based on correct mixing and use of the product according to instructions.

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R-1, S-2, F-0, C-1T

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## 1. Identification

**Product identifier** KODAK PHOTO-FLO 200 Solution

**Other means of identification**

**SDS number** PCD 3107

**Product code** 1464510

**Recommended use** Film or paper manufacturing chemical.

**Recommended restrictions** For industrial use only.

**Manufacturer/Importer/Supplier/Distributor information**

**Supplier** Kodak Alaris Inc

**Address** 2400 Mount Read Boulevard  
Rochester, NY 14615

**e-mail** EHS-Questions@Kodakalaris.com

**Emergency telephone number** 1-800-424-9300 OR +1 703-527-3887

## 2. Hazard(s) identification

**Physical hazards** Not classified.

**Health hazards** Serious eye damage/eye irritation Category 2

**Environmental hazards** Not classified.

**OSHA defined hazards** Not classified.

### Label elements



**Signal word** Warning

**Hazard statement** Causes serious eye irritation.

**Precautionary statement**

**Prevention** Wash thoroughly after handling. Wear eye protection/face protection.

**Response** If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

**Storage** Store away from incompatible materials.

**Disposal** Dispose of waste and residues in accordance with local authority requirements.

**Hazard(s) not otherwise classified (HNOC)** None known.

**Supplemental information** None.

## 3. Composition/information on ingredients

### Mixtures

Chemical name	Common name and synonyms	CAS number	%
Propylene glycol		57-55-6	25 - 30
Octylphenoxypolyethoxyethanol		9036-19-5	5 - 10

## 4. First-aid measures

**Inhalation** Move to fresh air. Call a physician if symptoms develop or persist.

**Skin contact** Wash off with soap and water. Get medical attention if irritation develops and persists.

<b>Eye contact</b>	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
<b>Ingestion</b>	Rinse mouth. Get medical attention if symptoms occur.
<b>Most important symptoms/effects, acute and delayed</b>	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.
<b>Indication of immediate medical attention and special treatment needed</b>	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
<b>General information</b>	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.
<b>5. Fire-fighting measures</b>	
<b>Suitable extinguishing media</b>	Alcohol resistant foam. Dry chemical or CO <sub>2</sub> .
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>Specific hazards arising from the chemical</b>	During fire, gases hazardous to health may be formed. ( Carbon oxides. )
<b>Special protective equipment and precautions for firefighters</b>	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
<b>Fire fighting equipment/instructions</b>	Move containers from fire area if you can do so without risk.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.
<b>General fire hazards</b>	No unusual fire or explosion hazards noted.
<b>6. Accidental release measures</b>	
<b>Personal precautions, protective equipment and emergency procedures</b>	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
<b>Methods and materials for containment and cleaning up</b>	Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.  Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.  Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.
<b>Environmental precautions</b>	Avoid discharge into drains, water courses or onto the ground.
<b>7. Handling and storage</b>	
<b>Precautions for safe handling</b>	Avoid contact with eyes. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.
<b>Conditions for safe storage, including any incompatibilities</b>	Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).
<b>8. Exposure controls/personal protection</b>	
<b>Occupational exposure limits</b>	This mixture has no ingredients that have PEL, TLV, or other recommended exposure limit.
<b>Biological limit values</b>	No biological exposure limits noted for the ingredient(s).
<b>Appropriate engineering controls</b>	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station.
<b>Individual protection measures, such as personal protective equipment</b>	
<b>Eye/face protection</b>	Wear safety glasses with side shields (or goggles).
<b>Skin protection</b>	
<b>Hand protection</b>	Wear appropriate chemical resistant gloves.
<b>Other</b>	Wear suitable protective clothing.

<b>Respiratory protection</b>	In case of insufficient ventilation, wear suitable respiratory equipment.
<b>Thermal hazards</b>	Wear appropriate thermal protective clothing, when necessary.
<b>General hygiene considerations</b>	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

## 9. Physical and chemical properties

### Appearance

<b>Physical state</b>	Liquid.
<b>Form</b>	Liquid.
<b>Color</b>	Colorless.
<b>Odor</b>	Odorless.
<b>Odor threshold</b>	Not available.
<b>pH</b>	7
<b>Melting point/freezing point</b>	Not available.
<b>Initial boiling point and boiling range</b>	> 212 °F (> 100 °C)
<b>Flash point</b>	does not flash
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not applicable.
<b>Upper/lower flammability or explosive limits</b>	
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	24 hPa
<b>Vapor density</b>	0.6
<b>Relative density</b>	1.028
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Complete.
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Other information</b>	
<b>Explosive properties</b>	Not explosive.
<b>Oxidizing properties</b>	Not oxidizing.

## 10. Stability and reactivity

<b>Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions</b>	Hazardous polymerization does not occur.
<b>Conditions to avoid</b>	Contact with incompatible materials.
<b>Incompatible materials</b>	Strong oxidizing agents.
<b>Hazardous decomposition products</b>	No hazardous decomposition products are known.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation</b>	No adverse effects due to inhalation are expected.
<b>Skin contact</b>	No adverse effects due to skin contact are expected.
<b>Eye contact</b>	Causes serious eye irritation.
<b>Ingestion</b>	Expected to be a low ingestion hazard.

**Symptoms related to the physical, chemical and toxicological characteristics**

Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

**Information on toxicological effects**

**Acute toxicity**

Not available.

**Skin corrosion/irritation**

Prolonged skin contact may cause temporary irritation.

**Serious eye damage/eye irritation**

Causes serious eye irritation.

**Respiratory or skin sensitization**

**Respiratory sensitization**

Not a respiratory sensitizer.

**Skin sensitization**

This product is not expected to cause skin sensitization.

**Germ cell mutagenicity**

No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

**Carcinogenicity**

This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

**IARC Monographs. Overall Evaluation of Carcinogenicity**

Not listed.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not regulated.

**US. National Toxicology Program (NTP) Report on Carcinogens**

Not listed.

**Reproductive toxicity**

This product is not expected to cause reproductive or developmental effects.

**Specific target organ toxicity - single exposure**

Not classified.

**Specific target organ toxicity - repeated exposure**

Not classified.

**Aspiration hazard**

Not an aspiration hazard.

**12. Ecological information**

**Ecotoxicity**

Harmful to aquatic life with long lasting effects.

**Components**

**Species**

**Test Results**

Octylphenoxypolyethoxyethanol (CAS 9036-19-5)

**Aquatic**

Fish

LC50

Rainbow trout,donaldson trout  
(Oncorhynchus mykiss)

7.2 mg/l, 96 hours

**Persistence and degradability**

No data is available on the degradability of this product.

**Bioaccumulative potential**

No data available.

**Mobility in soil**

No data available.

**Other adverse effects**

No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

**13. Disposal considerations**

**Disposal instructions**

Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.

**Local disposal regulations**

Dispose in accordance with all applicable regulations.

**Hazardous waste code**

The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

**Waste from residues / unused products**

Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

**Contaminated packaging**

Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

## 14. Transport information

### DOT

Not regulated as dangerous goods.

### IATA

Not regulated as dangerous goods.

### IMDG

Not regulated as dangerous goods.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not established.

## 15. Regulatory information

**US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

### TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

### CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

### SARA 304 Emergency release notification

Not regulated.

### OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

### Superfund Amendments and Reauthorization Act of 1986 (SARA)

**Hazard categories** Immediate Hazard - Yes  
Delayed Hazard - No  
Fire Hazard - No  
Pressure Hazard - No  
Reactivity Hazard - No

### SARA 302 Extremely hazardous substance

Not listed.

**SARA 311/312 Hazardous chemical** Yes

**SARA 313 (TRI reporting)**  
Not regulated.

### Other federal regulations

#### Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

#### Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

**Safe Drinking Water Act (SDWA)** Not regulated.

### US state regulations

#### US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

### International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes

Country(s) or region	Inventory name	On inventory (yes/no)*
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

## 16. Other information, including date of preparation or last revision

Issue date	04-01-2016
Revision date	07-12-2017
Version #	03
HMIS® ratings	Health: 2 Flammability: 1 Physical hazard: 0
NFPA ratings	Health: 2 Flammability: 1 Instability: 0

### NFPA ratings



### Disclaimer

Kodak Alaris cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.

### Revision information

Transport Information: Material Transportation Information  
GHS: Classification

**1. Identification**

**Product identifier** KODAK Rapid Fixer

**Other means of identification**

**SDS number** PCD F1720

**Product code** 5160353B

**Recommended use** Photographic processing chemical. (fixer). For industrial use only.

**Recommended restrictions** None known.

**Manufacturer/Importer/Supplier/Distributor information**

**Supplier** Kodak Alaris Inc

**Address** 2400 Mount Read Boulevard  
Rochester, NY 14615

**e-mail** EHS-Questions@Kodakalaris.com

**Emergency telephone number** 1-800-424-9300 OR +1 703-527-3887

**2. Hazard(s) identification**

**Physical hazards** Corrosive to metals Category 1

**Health hazards** Skin corrosion/irritation Category 1A  
Serious eye damage/eye irritation Category 1

**Environmental hazards** Not classified.

**OSHA defined hazards** Not classified.

**Label elements**



**Signal word** Danger

**Hazard statement** May be corrosive to metals. Causes severe skin burns and eye damage.

**Precautionary statement**

**Prevention** Keep only in original container. Do not breathe mist or vapor. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.

**Response** If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. Wash contaminated clothing before reuse. Absorb spillage to prevent material damage.

**Storage** Store locked up. Store in corrosive resistant container with a resistant inner liner.

**Disposal** Dispose of contents/container in accordance with local/regional/national/international regulations.

**Hazard(s) not otherwise classified (HNOC)** None known.

**Supplemental information** None.

**3. Composition/information on ingredients****Mixtures**

Chemical name	Common name and synonyms	CAS number	%
Aluminium sulphate		10043-01-3	15 - 20

Chemical name	Common name and synonyms	CAS number	%
Sulphuric acid		7664-93-9	10 - < 15

## 4. First-aid measures

<b>Inhalation</b>	Move to fresh air. Call a physician if symptoms develop or persist.
<b>Skin contact</b>	Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a physician or poison control center immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.
<b>Eye contact</b>	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.
<b>Ingestion</b>	Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
<b>Most important symptoms/effects, acute and delayed</b>	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.
<b>Indication of immediate medical attention and special treatment needed</b>	Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim under observation. Symptoms may be delayed.
<b>General information</b>	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

## 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>Specific hazards arising from the chemical</b>	During fire, gases hazardous to health may be formed.
<b>Special protective equipment and precautions for firefighters</b>	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
<b>Fire fighting equipment/instructions</b>	Move containers from fire area if you can do so without risk.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.

## 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
<b>Methods and materials for containment and cleaning up</b>	Should not be released into the environment. Prevent entry into waterways, sewer, basements or confined areas.  Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb spillage to prevent material damage. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.  Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.  Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.
<b>Environmental precautions</b>	Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground.

## 7. Handling and storage

<b>Precautions for safe handling</b>	Do not breathe mist or vapor. Do not get in eyes, on skin, or on clothing. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.
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**Conditions for safe storage, including any incompatibilities**

Store locked up. Store in a cool, dry place out of direct sunlight. Store in corrosive resistant container with a resistant inner liner. Keep only in the original container. Store away from incompatible materials (see Section 10 of the SDS).

**8. Exposure controls/personal protection****Exposure limit values****US. ACGIH Threshold Limit Values**

Components	Type	Value	Form
Aluminium sulphate (CAS 10043-01-3)	TWA	1 mg/m3	Respirable fraction.
Sulphuric acid (CAS 7664-93-9)	TWA	0.2 mg/m3	Thoracic fraction.

**Occupational exposure limits****US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)**

Components	Type	Value
Sulphuric acid (CAS 7664-93-9)	PEL	1 mg/m3

**Biological limit values**

No biological exposure limits noted for the ingredient(s).

**Appropriate engineering controls**

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

**Individual protection measures, such as personal protective equipment****Eye/face protection**

Wear safety glasses with side shields (or goggles) and a face shield.

**Skin protection****Hand protection**

Wear appropriate chemical resistant gloves.

**Other**

Wear appropriate chemical resistant clothing.

**Respiratory protection**

In case of insufficient ventilation, wear suitable respiratory equipment.

**Thermal hazards**

Wear appropriate thermal protective clothing, when necessary.

**General hygiene considerations**

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

**9. Physical and chemical properties****Appearance****Physical state**

Liquid.

**Form**

Liquid.

**Color**

colourless

**Odor**

slight sulphur

**Odor threshold**

Not available.

**pH**

1

**Melting point/freezing point**

Not available.

**Initial boiling point and boiling range**

212 °F (100 °C)

**Flash point**

does not flash

**Evaporation rate**

Not available.

**Flammability (solid, gas)**

Not applicable.

**Upper/lower flammability or explosive limits****Flammability limit - lower (%)**

Not available.

**Flammability limit - upper (%)**

Not available.

**Explosive limit - lower (%)**

Not available.

**Explosive limit - upper (%)**

Not available.

<b>Vapor pressure</b>	24 hPa
<b>Vapor density</b>	0.6
<b>Relative density</b>	1.3
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Complete.
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Other information</b>	
<b>Explosive properties</b>	Not explosive.
<b>Oxidizing properties</b>	Not oxidizing.

## 10. Stability and reactivity

<b>Reactivity</b>	Reacts violently with strong alkaline substances. This product may react with reducing agents. May be corrosive to metals.
<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions</b>	Hazardous polymerization does not occur.
<b>Conditions to avoid</b>	Contact with incompatible materials. Do not mix with other chemicals.
<b>Incompatible materials</b>	Bases. Metals.
<b>Hazardous decomposition products</b>	Carbon oxides. Sulfur oxides.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation</b>	May cause irritation to the respiratory system. Prolonged inhalation may be harmful.
<b>Skin contact</b>	Causes severe skin burns.
<b>Eye contact</b>	Causes serious eye damage.
<b>Ingestion</b>	Causes digestive tract burns. May cause burns of the gastrointestinal tract if swallowed.
<b>Symptoms related to the physical, chemical and toxicological characteristics</b>	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

### Information on toxicological effects

#### Acute toxicity

Components	Species	Test Results
Aluminium sulphate (CAS 10043-01-3)		
<u>Acute</u>		
Oral		
LD50	Rat	1930 mg/kg
Sulphuric acid (CAS 7664-93-9)		
<u>Acute</u>		
Inhalation		
LC50	Rat	347 mg/l, 1 Hours
Oral		
LD50	Rat	2140 mg/kg
Skin corrosion/irritation	Causes severe skin burns and eye damage.	
Serious eye damage/eye irritation	Causes serious eye damage.	
Respiratory or skin sensitization		
Respiratory sensitization	Not a respiratory sensitizer.	

<b>Skin sensitization</b>	This product is not expected to cause skin sensitization.
<b>Germ cell mutagenicity</b>	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
<b>Carcinogenicity</b>	International Agency for Research on Cancer (IARC) has determined that occupational exposure to strong inorganic mists or vapours containing sulfuric acid is carcinogenic to humans. Risk of cancer cannot be excluded with prolonged exposure.

#### IARC Monographs. Overall Evaluation of Carcinogenicity

Sulphuric acid (CAS 7664-93-9) 1 Carcinogenic to humans.

#### OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

#### US. National Toxicology Program (NTP) Report on Carcinogens

Sulphuric acid (CAS 7664-93-9) Known To Be Human Carcinogen.

<b>Reproductive toxicity</b>	This product is not expected to cause reproductive or developmental effects.
<b>Specific target organ toxicity - single exposure</b>	Not classified.
<b>Specific target organ toxicity - repeated exposure</b>	Not classified.
<b>Aspiration hazard</b>	Not an aspiration hazard.
<b>Chronic effects</b>	Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.

## 12. Ecological information

<b>Ecotoxicity</b>	Because of the low pH of this product, it would be expected to produce significant ecotoxicity upon exposure to aquatic organisms and aquatic systems.
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Product	Species		Test Results
KODAK Rapid Fixer			
Aquatic			
Crustacea	EC50	Daphnia	63.7838 mg/l, 48 hours estimated
Fish	LC50	Fish	103.662 mg/l, 96 hours estimated
Components	Species		Test Results
Aluminium sulphate (CAS 10043-01-3)			
Aquatic			
Crustacea	EC50	Amphipod (Crangonyx pseudogracilis)	11.8 - 14 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	3.4 - 5.6 mg/l, 96 hours
Sulphuric acid (CAS 7664-93-9)			
Aquatic			
Fish	LC50	Western mosquitofish (Gambusia affinis)	42 mg/l, 96 hours

<b>Persistence and degradability</b>	Not readily biodegradable.
<b>Bioaccumulative potential</b>	No data available.
<b>Mobility in soil</b>	No data available.
<b>Other adverse effects</b>	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

## 13. Disposal considerations

<b>Disposal instructions</b>	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Dispose of contents/container in accordance with local/regional/national/international regulations.
<b>Local disposal regulations</b>	Dispose in accordance with all applicable regulations.
<b>Hazardous waste code</b>	D002: Waste Corrosive material [pH ≤2 or ≥12.5, or corrosive to steel] The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
<b>Waste from residues / unused products</b>	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

**Contaminated packaging**

Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

**14. Transport information****DOT**

<b>UN number</b>	UN3264
<b>UN proper shipping name</b>	Corrosive liquid, acidic, inorganic, n.o.s. (Sulphuric acid RQ = 9615 LBS, Aluminium sulphate RQ = 27027 LBS)
<b>Transport hazard class(es)</b>	
<b>Class</b>	8
<b>Subsidiary risk</b>	-
<b>Label(s)</b>	8
<b>Packing group</b>	III
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.
<b>Special provisions</b>	IB3, T7, TP1, TP28
<b>Packaging exceptions</b>	154
<b>Packaging non bulk</b>	203
<b>Packaging bulk</b>	241

**IATA**

<b>UN number</b>	UN3264
<b>UN proper shipping name</b>	Corrosive liquid, acidic, inorganic, n.o.s. (Sulphuric acid, Aluminium sulphate)
<b>Transport hazard class(es)</b>	
<b>Class</b>	8
<b>Subsidiary risk</b>	-
<b>Packing group</b>	III
<b>Environmental hazards</b>	No.
<b>ERG Code</b>	8L
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.

**IMDG**

<b>UN number</b>	UN3264
<b>UN proper shipping name</b>	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Sulphuric acid, Aluminium sulphate)
<b>Transport hazard class(es)</b>	
<b>Class</b>	8
<b>Subsidiary risk</b>	-
<b>Packing group</b>	III
<b>Environmental hazards</b>	
<b>Marine pollutant</b>	No.
<b>EmS</b>	F-A, S-B
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not established.

**DOT**



## 15. Regulatory information

### US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

#### TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

#### CERCLA Hazardous Substance List (40 CFR 302.4)

Aluminium sulphate (CAS 10043-01-3) Listed.

Sulphuric acid (CAS 7664-93-9) Listed.

#### SARA 304 Emergency release notification

Sulphuric acid (CAS 7664-93-9) 1000 LBS

#### OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

### Superfund Amendments and Reauthorization Act of 1986 (SARA)

#### Hazard categories

Immediate Hazard - Yes

Delayed Hazard - No

Fire Hazard - No

Pressure Hazard - No

Reactivity Hazard - No

#### SARA 302 Extremely hazardous substance

Chemical name	CAS number	Reportable quantity (pounds)	Threshold planning quantity (pounds)	Threshold planning quantity, lower value (pounds)	Threshold planning quantity, upper value (pounds)
Sulphuric acid	7664-93-9	1000	1000		

**SARA 311/312 Hazardous chemical** Yes

#### SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Sulphuric acid	7664-93-9	10 - < 15

### Other federal regulations

#### Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

#### Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Sulphuric acid (CAS 7664-93-9)

**Safe Drinking Water Act (SDWA)** Not regulated.

#### Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number

Sulphuric acid (CAS 7664-93-9) 6552

#### Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

Sulphuric acid (CAS 7664-93-9) 20 %WV

#### DEA Exempt Chemical Mixtures Code Number

Sulphuric acid (CAS 7664-93-9) 6552

## US state regulations

### US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

Sulphuric acid (CAS 7664-93-9)

### US. California Proposition 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

### US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

Sulphuric acid (CAS 7664-93-9)

Listed: March 14, 2003

## International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

## 16. Other information, including date of preparation or last revision

Issue date	11-20-2016
Revision date	03-31-2017
Version #	02
HMIS® ratings	Health: 3 Flammability: 0 Physical hazard: 0
NFPA ratings	Health: 3 Flammability: 0 Instability: 0

### NFPA ratings



### Disclaimer

Kodak Alaris cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.

### Revision information

This document has undergone significant changes and should be reviewed in its entirety.