

# Safety data sheet

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

Printing date 08.04.2013

Version 1

Revision: 31.03.2013


### 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 preparation**  
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:**  
HANS O. MAHN GmbH & Co. KG  
Brookstieg 4  
22145 Stapelfeld  
Tel: +49(0)40/2370080  
Email: photo@mahn.net  
http://www.mahn.net/
- **Informing department:**  
Tel: +49(0)40/2370080  
Email: photo@mahn.net
- **1.4 Emergency telephone number:** Tel.: 0700-24112112 (CAL)

### 2 Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
-  GHS07  
 Skin Irrit. 2 H315 Causes skin irritation.  
 Eye Irrit. 2 H319 Causes serious eye irritation.  
 STOT SE 3 H335 May cause respiratory irritation.

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- **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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- **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**



GHS07

- **Signal word** Warning

- **Hazard statements**

H315 Causes skin irritation.

H319 Causes serious eye irritation.

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.

P103 Read label before use.

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

P337+P313 If eye irritation persists: 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.

### 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	potassium carbonate Xn R22 Xi R36/37/38 Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	25-50%
CAS: 139-89-9 EINECS: 205-381-9	Hydroxyethylethylenediaminetriacetic acid, trisodium salt, solution Xi R36/38 Skin Irrit. 2, H315; Eye Irrit. 2, H319	2.0-5.0%
CAS: 2809-21-4 EINECS: 220-552-8	1-hydroxy-1,1-diphosphon acid Xi R36/38 Skin Irrit. 2, H315; Eye Irrit. 2, H319	2.0-5.0%
CAS: 1310-58-3 EINECS: 215-181-3	potassium hydroxide C R35 Xn R22 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.

### 4 First aid measures

- **4.1 Description of first aid measures**

- **General information** Instantly remove any clothing soiled by the product.

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- **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 (> 15 min). Then consult doctor.
- **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.

### 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>)
- **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

### 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.

### 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

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- **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.

### 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:**

<b>1310-58-3 potassium hydroxide</b>	
WEL	Short-term value: 2 mg/m <sup>3</sup>

- **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.
- **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)

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- **Eye protection:** Safety glasses
- **Body protection:** Light weight protective clothing

### 9 Physical and chemical properties

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

##### · General Information

##### · Appearance:

Form: Fluid  
 Colour: 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

· **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

· **Oxidizing properties** Not applicable

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

· **Density at 20 °C** 1.34 g/cm<sup>3</sup>

##### · Solubility in / Miscibility with

Water: miscible

##### · Viscosity:

dynamic: Not determined  
 kinematic: Not determined

##### · Solvent content:

Organic solvents: 0.0 %

· **9.2 Other information** None

### 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.

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- **10.6 Hazardous decomposition products:** No dangerous decomposition products known

### 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)
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- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritant effect.
- **Sensitization:** 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.

### 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 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.

### 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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- **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.

### 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

- **14.6 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":** -

### 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.

### 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**

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

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H335 May cause respiratory irritation.

R22 Harmful if swallowed.

R35 Causes severe burns.

R36/37/38 Irritating to eyes, respiratory system and skin.

R36/38 Irritating to eyes and skin.

**• 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

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

**• 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



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### 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 preparation**

Photographic activities  
Photochemicals  
Photographic developer  
Colour film photographic processing solution

- **1.3 Details of the supplier of the safety data sheet**

- **Manufacturer/Supplier:**

HANS O. MAHN GmbH & Co. KG  
Brookstieg 4  
22145 Stapelfeld  
Tel: +49(0)40/2370080  
Email: photo@mahn.net  
http://www.mahn.net/

- **Informing department:**

Tel: +49(0)40/2370080  
Email: photo@mahn.net

- **1.4 Emergency telephone number:** Tel.: 0700-24112112 (CAL)

### 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.

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- **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 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.

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- **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**

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

P302+P352 IF ON SKIN: Wash with plenty of soap and 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.

### 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	bis(hydroxylammonium) sulphate Xn R21/22-40-48/22 Xi R36/38 Xi R43 E R2 N R50 Carc. Cat. 3 <hr/> STOT RE 2, H373 Met. Corr.1, H290 Aquatic Acute 1, H400 Acute Tox. 4, H302; 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.

### 4 First aid measures

- **4.1 Description of first aid measures**

- **General information** 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 (&gt; 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.

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- **4.3 Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### 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.
- **Additional information** The product is not flammable

### 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.  
See Section 13 for information on disposal.

### 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.
- **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:** 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.

### 8 Exposure controls/personal protection

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

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- **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.

Keep away from foodstuffs, beverages and food.

Take off immediately all contaminated clothing.

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:

≥ 3 (60 min)

- **Eye protection:** Safety glasses

- **Body protection:** Light weight protective clothing

## 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:** Odourless

- **Odour threshold:** Not applicable

- **pH-value at 20 °C:** 3.5

- **Change in condition**

**Melting point/Melting range:** Not determined

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<b>Boiling point/Boiling range:</b>	> 100 °C
· <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>	
<b>Lower:</b>	Not applicable
<b>Upper:</b>	Not applicable
· <b>Oxidizing properties</b>	Not applicable
· <b>Vapour pressure at 20 °C:</b>	23 hPa
· <b>Density at 20 °C</b>	1.023 g/cm <sup>3</sup>
· <b>Relative density</b>	Not determined.
· <b>Vapour density</b>	Not determined.
· <b>Evaporation rate</b>	Not determined.
· <b>Solubility in / Miscibility with Water:</b>	miscible
· <b>Partition coefficient (n-octanol/water):</b>	Not determined.
· <b>Viscosity:</b>	
<b>dynamic:</b>	Not determined
<b>kinematic:</b>	Not determined
· <b>Solvent content:</b>	
<b>Organic solvents:</b>	0.0 %
· <b>9.2 Other information</b>	No further relevant information available.

## 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

## 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)

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- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritant effect.
- **Sensitization:** 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.

## 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:**  
Water hazard class 2 (German Regulation) (Self-assessment): Water-endangering.  
Do not allow product to reach ground water, water bodies or sewage system.  
Do not allow undiluted product or large quantities of it 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.  
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.

## 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.

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## Safety data sheet

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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.

#### 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>14.6 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>	-

#### 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.

#### 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.
  - H315 Causes skin irritation.
  - H317 May cause an allergic skin reaction.
  - H319 Causes serious eye irritation.
  - 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.
- R36/38 Irritating to eyes and skin.
- R40 Limited evidence of a carcinogenic effect.

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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.

· **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

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

· **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

GB



# Safety data sheet

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

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Version 1

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### 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 preparation**

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:**

HANS O. MAHN GmbH & Co. KG  
Brookstieg 4  
22145 Stapelfeld  
Tel: +49(0)40/2370080  
Email: photo@mahn.net  
http://www.mahn.net/

- **Informing department:**

Tel: +49(0)40/2370080  
Email: photo@mahn.net

- **1.4 Emergency telephone number:** Tel.: 0700-24112112 (CAL)

### 2 Hazards identification

- **2.1 Classification of the substance or mixture**

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



GHS08

STOT RE 2          H373 May cause damage to organs through prolonged or repeated exposure.



GHS09

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.

Xi; Sensitising

R43:                  May cause sensitisation by skin contact.

N; Dangerous for the environment

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

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(Contd. of page 1)

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**

P273 Avoid release to the environment.

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

P314 Get medical advice/attention if you feel unwell.

P302+P352 IF ON SKIN: Wash with plenty of soap and 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.

### 3 Composition/information on ingredients

· **3.2 Mixtures**

· **Description:** Mixture of the substances listed below with harmless additions.

· **Dangerous components:**

CAS: 25646-77-9 EINECS: 247-162-0	4-(N-ethyl-N-2-hydroxyethyl)-2-methylphenylenediamine sulphate T R25 Xn R48/22 Xi R43 N R50/53	5.0-10%
	Acute Tox. 3, H301 STOT RE 2, H373 Aquatic Acute 1, H400; Aquatic Chronic 1, H410 Skin Sens. 1, H317	

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

GB

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### 4 First aid measures

- **4.1 Description of first aid measures**
- **General information**  
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 (> 15 min). Then consult doctor.
- **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.

### 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>)
- **5.3 Advice for firefighters**
- **Protective equipment:** Do not inhale explosion gases or combustion gases.

### 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.

### 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

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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.  
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.

## 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.  
Keep away from foodstuffs, beverages and food.  
Take off immediately all contaminated clothing.  
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

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- **Eye protection:** Safety glasses

### 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.

##### · 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.

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### 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 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

### 11 Toxicological information

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

- **LD/LC50 values that are relevant for classification:**

<b>25646-77-9 4-(N-ethyl-N-2-hydroxyethyl)-2-methylphenylenediamine sulphate</b>		
Oral	LD50	45 mg/kg (rat)

- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritant effect.
- **Sensitization:** 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.

### 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:**  
4-(N-ETHYL-N-2-HYDROXYETHYL)-2-METHYLPHENYLENEDIAMINE SULPHATE:  
LC50 daphnia (48 h): 0,63-0,78 mg/l
- **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.

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

Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system.

Danger to drinking water if even small quantities leak into soil.

Also poisonous for fish and plankton in water bodies.

At present there are no ecotoxicological assessments.

The product does not contain organically bounded halogens (AOX-free).

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.

### 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.

### 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)

- **IMDG**

ENVIRONMENTALLY HAZARDOUS  
SUBSTANCE, LIQUID, N.O.S. (4-(N-ethyl-N-2-  
hydroxyethyl)-2-methylphenylenediamine sulphate),  
MARINE POLLUTANT

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

- **ADR**



- **Class**

9 (M6) Miscellaneous dangerous substances and articles.

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## Safety data sheet

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Trade name: C-41 KIT CD-C

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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: 4-(N-ethyl-N-2-hydroxyethyl)-2-methylphenylenediamine sulphate
· 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.
· Kemler Number:	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
· Remarks:	"Limited quantity" according to chapter 3.4 ADR
· IMDG	
· Remarks:	"Limited quantity" according to chapter 3.4 IMDG
· IATA	
· Remarks:	Packing Instruction PAX/CAO 964
· UN "Model Regulation":	UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (4-(N-ethyl-N-2-hydroxyethyl)-2-methylphenylenediamine sulphate), 9, III

### 15 Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- National regulations
- 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.

GB

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**Trade name: C-41 KIT CD-C**

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### 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.

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.

#### • 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

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

#### • 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

# Safety data sheet

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

Printing date 08.04.2013

Version 1

Revision: 31.03.2013

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

- **1.1 Product identifier**

- **Trade name: C-41 KIT BX-A**

---

- **Article number: 13025**

- **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 preparation**

Photochemicals  
Photographic activities  
Consumer use  
bleach solution

- **1.3 Details of the supplier of the safety data sheet**

- **Manufacturer/Supplier:**

HANS O. MAHN GmbH & Co. KG  
Brookstieg 4  
22145 Stapelfeld  
Tel: +49(0)40/2370080  
Email: photo@mahn.net  
http://www.mahn.net/

- **Informing department:**

Tel: +49(0)40/2370080  
Email: photo@mahn.net

- **1.4 Emergency telephone number:** Tel.: 0700-24112112 (CAL)

### 2 Hazards identification

- **2.1 Classification of the substance or mixture**

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



GHS05

Met. Corr.1 H290 May be corrosive to metals.

---

- **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.  
May be corrosive to metals.

- **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**



GHS05

- **Signal word** Warning

(Contd. on page 2)

# Safety data sheet

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

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Trade name: C-41 KIT BX-A







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- **Hazard statements**  
H290 May be corrosive to metals.
- **Precautionary statements**  
P234 Keep only in original container.  
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.

### 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	ammonium iron(III)trimethylenediaminetetraacetate hemihydrate  N R51/53  Aquatic Chronic 2, H411	10-15%
CAS: 110-15-6 EINECS: 203-740-4	succinic acid  Xi R36  Eye Irrit. 2, H319	5.0-10%
CAS: 6484-52-2 EINECS: 229-347-8	ammonium nitrate  O R8-9  Ox. Sol. 1, H271	5.0-10%

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

### 4 First aid measures

- **4.1 Description of first aid measures**
- **General information** Instantly remove any clothing soiled by the product.
- **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.  
In case of persistent symptoms 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.

### 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.

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- **For safety reasons unsuitable extinguishing agents** Water with a full water jet.
- **5.2 Special hazards arising from the substance or mixture**  
Formation of poisonous gases during heating or in fires.
- **5.3 Advice for firefighters**
- **Protective equipment:**  
Put on breathing apparatus.  
Do not inhale explosion gases or combustion gases.

### 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 8 for information on personal protection equipment.  
See Section 13 for information on disposal.

### 7 Handling and storage

- **7.1 Precautions for safe handling** No special precautions necessary if used correctly.
- **Information about protection against explosions and fires:** Protect from heat.
- **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:**  
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.

### 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.  
Keep away from foodstuffs, beverages and food.  
Take off immediately all contaminated clothing.  
Wash hands during breaks and at the end of the work.

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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:

≥ 3 (60 min)

· **Eye protection:** Tightly sealed safety glasses.

· **Body protection:**

Instantly remove any clothing soiled by the product.

Protective work clothing.

## 9 Physical and chemical properties

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

· **General Information**

· **Appearance:**

· <b>Form:</b>	Fluid
· <b>Colour:</b>	Dark green
· <b>Odour:</b>	Recognizable
· <b>Odour threshold:</b>	Not determined.

· **pH-value at 20 °C:** 3.8

· **Change in condition**

· <b>Melting point/Melting range:</b>	Not determined
· <b>Boiling point/Boiling range:</b>	> 100 °C

· **Flash point:** Not applicable

· **Inflammability (solid, gaseous)** Not applicable.

· **Ignition temperature:** Not determined

· **Decomposition temperature:** Not determined.

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

· **Danger of explosion:** Product is not explosive.

· **Critical values for explosion:**

· **Lower:** Not determined.

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<b>Upper:</b>	Not determined.
· <b>Vapour pressure at 20 °C:</b>	23 hPa
· <b>Density at 20 °C</b>	1.16 g/cm <sup>3</sup>
· <b>Relative density</b>	Not determined.
· <b>Vapour density</b>	Not determined.
· <b>Evaporation rate</b>	Not determined.
· <b>Solubility in / Miscibility with Water:</b>	miscible
· <b>Partition coefficient (n-octanol/water):</b>	Not determined.
· <b>Viscosity:</b>	
<b>dynamic:</b>	Not determined.
<b>kinematic:</b>	Not determined.
· <b>Solvent content:</b>	
<b>Organic solvents:</b>	0.0 %
· <b>9.2 Other information</b>	No further relevant information available.

### 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 and alkali  
Reacts with 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:** No dangerous decomposition products known

### 11 Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** mild irritant
- **Sensitization:** No sensitizing effect known.
- **Additional toxicological information:**  
This statement was deduced from the properties of the single components.

### 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.

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- **Ecotoxicological effects:**
- **Remark:** Harmful to fish
- **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.  
 Do not allow undiluted product or large quantities of it 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.  
 The product does not contain organically bounded halogens (AOX-free).  
 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.

### 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 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.

### 14 Transport information

- |                                                                                                               |                                                                                                                 |
|---------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>· <b>14.1 UN-Number</b></li> <li>· <b>ADR, IMDG, IATA</b></li> </ul>   | UN 3265                                                                                                         |
| <ul style="list-style-type: none"> <li>· <b>14.2 UN proper shipping name</b></li> <li>· <b>ADR</b></li> </ul> | 3265 CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (ammonium iron(III) trimethylenediaminetetraacetate hemihydrate) |
| <ul style="list-style-type: none"> <li>· <b>IMDG, IATA</b></li> </ul>                                         | CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (ammonium iron(III) trimethylenediaminetetraacetate hemihydrate)      |

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

- **ADR**



- **Class** 8 (C3) Corrosive substances.
- **Label** 8

- **IMDG, IATA**



- **Class** 8 Corrosive substances.
- **Label** 8

- **14.4 Packing group**

- **ADR, IMDG, IATA** III

- **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)** 5L
- **Transport category** 3
- **Tunnel restriction code** E
- **Remarks:** "Limited quantity" according to chapter 3.4 ADR

- **IMDG**

- **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

## 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.

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### 16 Other information

**· 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.

**· 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

**· 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

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

- **1.1 Product identifier**
- **Trade name: C-41 KIT BX-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 preparation**  
Photographic activities  
Consumer use  
Photochemicals  
Photographic fixer
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
HANS O. MAHN GmbH & Co. KG  
Brookstieg 4  
22145 Stapelfeld  
Tel: +49(0)40/2370080  
Email: photo@mahn.net  
<http://www.mahn.net/>
- **Informing department:**  
Tel: +49(0)40/2370080  
Email: photo@mahn.net
- **1.4 Emergency telephone number:** Tel.: 0700-24112112 (CAL)

### 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.

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- **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.

### 3 Composition/information on ingredients

- **3.2 Mixtures**
- **Description:** Mixture of the substances listed below with harmless additions.

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- **Dangerous components:** Void

### 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.

### 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:** No special measures required.
- **Additional information** The product is not flammable

### 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 8 for information on personal protection equipment.  
See Section 13 for information on disposal.

### 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

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- **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
- (German Technical Rule for Hazardous Substance – TRGS 510)
- **7.3 Specific end use(s)** No further relevant information available.

### 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.
- **Breathing equipment:** Not required.
- **Protection of hands:** Not required.
- **Eye protection:** Safety glasses recommended during refilling.
- **Body protection:** Light weight protective clothing

### 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:** > 100 °C
- **Flash point:** Not applicable
- **Self-inflammability:** Product is not selfigniting.
- **Danger of explosion:** Product is not explosive.
- **Critical values for explosion:**
- Oxidizing properties** None

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· 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: Organic solvents:	0 %
· 9.2 Other information	No further relevant information available.

### 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

### 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.
- **Sensitization:** 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.

### 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.
- **Ecotoxic effects:** Not determined
- **Behaviour in sewage processing plants:** Not determined

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- **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.  
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.

### 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
-----------	-----------------

- **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.

### 14 Transport information

- |                                                                                                                                                           |                                                      |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|
| <ul style="list-style-type: none"> <li>· <b>14.1 UN-Number</b></li> <li>· <b>ADR, ADN, IMDG, IATA</b></li> </ul>                                          | Void                                                 |
| <ul style="list-style-type: none"> <li>· <b>14.2 UN proper shipping name</b></li> <li>· <b>ADR</b></li> <li>· <b>ADN, IMDG, IATA</b></li> </ul>           | Void<br>Void                                         |
| <ul style="list-style-type: none"> <li>· <b>14.3 Transport hazard class(es)</b></li> <li>· <b>ADR, ADN, IMDG, IATA</b></li> <li>· <b>Class</b></li> </ul> | Void                                                 |
| <ul style="list-style-type: none"> <li>· <b>14.4 Packing group</b></li> <li>· <b>ADR, IMDG, IATA</b></li> </ul>                                           | Void                                                 |
| <ul style="list-style-type: none"> <li>· <b>14.6 Special precautions for user</b></li> </ul>                                                              | Not applicable.                                      |
| <ul style="list-style-type: none"> <li>· <b>14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b></li> </ul>                   | Not applicable.                                      |
| <ul style="list-style-type: none"> <li>· <b>Transport/Additional information:</b></li> </ul>                                                              | Not dangerous according to the above specifications. |
| <ul style="list-style-type: none"> <li>· <b>UN "Model Regulation":</b></li> </ul>                                                                         | -                                                    |

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### 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.

### 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.

- **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

- **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>

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

- **1.1 Product identifier**
- **Trade name: C-41 KIT SB**
- **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 preparation**  
Photographic activities  
Photochemicals  
photographic processing chemical  
Colour film photographic processing solution
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
HANS O. MAHN GmbH & Co. KG  
Brookstieg 4  
22145 Stapelfeld  
Tel: +49(0)40/2370080  
Email: photo@mahn.net  
<http://www.mahn.net/>
- **Informing department:**  
Tel: +49(0)40/2370080  
Email: photo@mahn.net
- **1.4 Emergency telephone number:** Tel.: 0700-24112112 (CAL)

### 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 has 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.

### 3 Composition/information on ingredients

- **3.2 Mixtures**
- **Description:** Mixture of the substances listed below with harmless additions.

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### · Dangerous components:

	Alkylphenoethoxylate  Xn R22  Xi R41  N R51/53 <hr style="border-top: 1px dashed black;"/>  Eye Dam. 1, H318  Aquatic Chronic 2, H411  Acute Tox. 4, H302	< 0.5%
55965-84-9	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 <hr style="border-top: 1px dashed black;"/>  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.

## 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.

## 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>)
- **5.3 Advice for firefighters**
- **Protective equipment:** Do not inhale explosion gases or combustion gases.

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- **Additional information** The product is not flammable

### 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.

### 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.

### 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.  
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.
- **Protection of hands:** Not required.
- **Eye protection:** Not required.

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- **Body protection:** Not required.

### 9 Physical and chemical properties

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

##### · General Information

##### · Appearance:

Form:	Fluid
Colour:	Colourless
Odour:	Not characteristic

· pH-value: 6-7

##### · Change in condition

Melting point/Melting range:	Not determined
Boiling point/Boiling range:	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:

dynamic:	Not determined
kinematic:	Not determined

##### · Solvent content:

Organic solvents: 0.0 %

· 9.2 Other information No further relevant information available.

### 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

### 11 Toxicological information

#### · 11.1 Information on toxicological effects

##### · Acute toxicity:

##### · Primary irritant effect:

· on the skin: No irritant effect.

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- **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.

### 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.

### 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
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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.
- **Recommended cleaning agent:** Water, if necessary with cleaning agent.

### 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 |

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· <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>14.6 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>	-

### 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.

### 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.
- 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.
- H400 Very toxic to aquatic life.
- H410 Very toxic to aquatic life with long lasting effects.
- H411 Toxic 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.
- R41 Risk of serious damage to eyes.
- R43 May cause sensitisation by skin contact.
- R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

- **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

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GHS: Globally Harmonized System of Classification and Labelling of Chemicals

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**· 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>

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