

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

<b>Water, pure, demineralized, 1 l</b>		
Print date: 15.04.2015	Product code: 9992067a	Page 1 of 5

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

**1.1. Product identifier**

Water, pure, demineralized, 1 l

CAS No: 7732-18-5  
EC No: 213-791-2

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

**Use of the substance/mixture**

Laboratory chemicals

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

**Seller**

Company name: CONATEX-DIDACTIC Lehrmittel GmbH  
Street: Im Forstgarten 1  
Place: D-66459 Kirkel  
Internet: www.conatex.com

**Supplier**

Company name: Carbolution Chemicals GmbH  
Street: Im Stadtwald, Gebäude A1.2  
Place: D-66123 Saarbrücken  
Contact person: Dr. Michael Bauer Telephone: +49 (0)681 302-71232  
e-mail: michael.bauer@carbolution-chemicals.de  
Internet: www.carbolution-chemicals.de

**1.4. Emergency telephone number:** +49 (0)681 302-71232

**SECTION 2: Hazards identification**

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

**Classification according to Regulation (EC) No. 1272/2008 [CLP]**

This substance is not classified as hazardous according to Regulation (EC) No. 1272/2008.

**2.2. Label elements**

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

**3.1. Substances**

**Hazardous components**

EC No	Chemical name	Quantity
CAS No	Classification according to Directive 67/548/EEC	
Index No	Classification according to Regulation (EC) No. 1272/2008 [CLP]	
	@0000000000002	100 %

Full text of R-, H- and EUH-phrases: see section 16.

**SECTION 4: First aid measures**

**4.1. Description of first aid measures**

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

No data available

**SECTION 5: Firefighting measures**

**5.1. Extinguishing media**

**5.2. Special hazards arising from the substance or mixture**

The product itself does not burn.

**SECTION 6: Accidental release measures**

**SECTION 7: Handling and storage**

**7.1. Precautions for safe handling**

**7.2. Conditions for safe storage, including any incompatibilities**

**SECTION 8: Exposure controls/personal protection**

**8.1. Control parameters**

**8.2. Exposure controls**

**SECTION 9: Physical and chemical properties**

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

Physical state:	liquid
Colour:	clear colourless
Odour:	odourless

**Test method**

pH-Value:	7,0
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**Changes in the physical state**

Melting point:	0 °C
Initial boiling point and boiling range:	100 °C
Sublimation point:	No data available
Softening point:	No data available
Flash point:	Daten nicht verfügbar

**Flammability**

Solid:	No data available
Gas:	No data available

Lower explosion limits:	No data available
Upper explosion limits:	No data available
Ignition temperature:	No data available

**Auto-ignition temperature**

Solid:	No data available
Gas:	No data available

Vapour pressure:	No data available
Vapour pressure:	No data available

Density:	0,998 g/cm <sup>3</sup>
Water solubility:	No data available

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Partition coefficient:	No data available
Viscosity / dynamic:	No data available
Viscosity / kinematic:	No data available
Flow time:	Daten nicht verfügbar0
Vapour density:	No data available
Evaporation rate:	No data available
Solvent separation test:	No data available
Solvent content:	No data available

#### **9.2. Other information**

Solid content:	No data available
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### SECTION 10: Stability and reactivity

#### **10.1. Reactivity**

No data available

#### **10.3. Possibility of hazardous reactions**

No data available

#### **10.4. Conditions to avoid**

No data available

### SECTION 11: Toxicological information

#### **11.1. Information on toxicological effects**

##### **Toxicokinetics, metabolism and distribution**

Toxicological data are not available.

##### **Acute toxicity**

Toxicological data are not available.

##### **Irritation and corrosivity**

No data available

##### **Sensitising effects**

No data available

##### **Severe effects after repeated or prolonged exposure**

No data available

##### **Carcinogenic/mutagenic/toxic effects for reproduction**

Due to missing data no statement can be made whether the substance fulfills the criteria of CMR categories 1 or 2. Practical experiences do not give any evidence for CMR activity of categories 1 or 2.

##### **Specific effects in experiment on an animal**

No data available

##### **Additional information on tests**

The classification was carried out according to the calculation method of the Preparations Directive (1999/45/EC).

##### **Practical experience**

##### **Observations relevant to classification**

No data available

### SECTION 12: Ecological information

#### **12.1. Toxicity**

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No data available

**12.2. Persistence and degradability**

No data available

**12.3. Bioaccumulative potential**

No data available

**12.4. Mobility in soil**

No data available

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

No data available

**12.6. Other adverse effects**

No data available

**Further information**

The classification was carried out according to the calculation method of the Preparations Directive (1999/45/EC).

**SECTION 13: Disposal considerations****13.1. Waste treatment methods****Advice on disposal**

Dispose of waste according to applicable legislation.

**Waste disposal number of waste from residues/unused products**

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals  
Classified as hazardous waste.

**Waste disposal number of used product**

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals  
Classified as hazardous waste.

**Waste disposal number of contaminated packaging**

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by dangerous substances  
Classified as hazardous waste.

**Contaminated packaging**

Water (with cleaning agent). Completely emptied packages can be recycled.

**SECTION 14: Transport information****Land transport (ADR/RID)****Other applicable information (land transport)**

No dangerous good in sense of these transport regulations.

**Inland waterways transport (ADN)****Other applicable information (inland waterways transport)**

No dangerous good in sense of these transport regulations.

**Marine transport (IMDG)****Other applicable information (marine transport)**

No dangerous good in sense of these transport regulations.

**Air transport (ICAO)**

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#### Other applicable information (air transport)

No dangerous good in sense of these transport regulations.

#### 14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

### SECTION 15: Regulatory information

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

##### EU regulatory information

##### Additional information

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

##### National regulatory information

Water contaminating class (D): - - not water contaminating

### SECTION 16: Other information

## Safety Data Sheet

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### Tin(II) oxalate, 100 g

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

### 1.1. Product identifier

Tin(II) oxalate, 100 g

CAS No: 814-94-8  
Index No: 607-007-00-3  
EC No: 212-414-0

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

#### Use of the substance/mixture

Laboratory chemicals

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

#### Seller

Company name: CONATEX-DIDACTIC Lehrmittel GmbH  
Street: Im Forstgarten 1  
Place: D-66459 Kirkel  
Internet: www.conatex.com

#### Supplier

Company name: Carbolution Chemicals GmbH  
Street: Im Stadtwald, Gebäude A1.2  
Place: D-66123 Saarbrücken  
Contact person: Dr. Michael Bauer Telephone: +49 (0)681 302-71232  
e-mail: michael.bauer@carbolution-chemicals.de  
Internet: www.carbolution-chemicals.de

### 1.4. Emergency telephone number:

+49 (0)681 302-71232

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

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

Indications of danger: Xn - Harmful  
R phrases:  
Harmful in contact with skin and if swallowed.

#### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Hazard categories:  
Acute toxicity: Acute Tox. 4  
Acute toxicity: Acute Tox. 4  
Hazard Statements:  
Harmful in contact with skin.  
Harmful if swallowed.

### 2.2. Label elements

Signal word: Warning  
Pictograms: GHS07



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**Hazard statements**

H302 Harmful if swallowed.  
H312 Harmful in contact with skin.

**Precautionary statements**

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

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

**3.1. Substances**

Sum formula: C2O4Sn  
Molecular weight: 206,73

**Hazardous components**

EC No	Chemical name	Quantity
CAS No	Classification according to Directive 67/548/EEC	
Index No	Classification according to Regulation (EC) No. 1272/2008 [CLP]	
-	salts of oxalic acid with the exception of those specified elsewhere in this Annex	100 %
-	Xn - Harmful R21/22	
607-007-00-3	Acute Tox. 4, Acute Tox. 4; H312 H302	

Full text of R-, H- and EUH-phrases: see section 16.

**SECTION 4: First aid measures**

**4.1. Description of first aid measures**

**General information**

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

**After inhalation**

Provide fresh air.

**After contact with skin**

Wash with plenty of water. Change contaminated clothing. Medical treatment necessary.

**After contact with eyes**

Rinse immediately carefully and thoroughly with eye-bath or water. In case of troubles or persistent symptoms, consult an ophthalmologist.

**After ingestion**

Rinse mouth immediately and drink plenty of water. Medical treatment necessary.

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

No data available

**SECTION 5: Firefighting measures**

**5.1. Extinguishing media**

**Suitable extinguishing media**

Co-ordinate fire-fighting measures to the fire surroundings.

**5.2. Special hazards arising from the substance or mixture**

The product itself does not burn.

**5.3. Advice for firefighters**

In case of fire: Wear self-contained breathing apparatus.

**Additional information**

Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water

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separately. Do not allow entering drains or surface water.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**

Provide adequate ventilation. Avoid generation of dust. Do not breathe dust. Avoid contact with skin, eyes and clothes. Wear personal protection equipment.

**6.2. Environmental precautions**

Do not allow to enter into surface water or drains.

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

Take up mechanically. Treat the recovered material as prescribed in the section on waste disposal.

**SECTION 7: Handling and storage****7.1. Precautions for safe handling****Advice on safe handling**

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe dust.

**Advice on protection against fire and explosion**

Only use the material in places where open light, fire and other flammable sources can be kept away.

**7.2. Conditions for safe storage, including any incompatibilities****Requirements for storage rooms and vessels**

Keep container tightly closed.

**SECTION 8: Exposure controls/personal protection****8.1. Control parameters****8.2. Exposure controls****Appropriate engineering controls**

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe dust.

**Protective and hygiene measures**

Remove contaminated, saturated clothing immediately. Protect skin by using skin protective cream. After work, wash hands and face. When using do not eat or drink.

**Eye/face protection**

Eye protection: Tightly sealed safety glasses. German Industry Norms (DIN) / European Norms (EN): DIN EN 166

**Hand protection**

Hand protection: Single-use gloves. Before using check leak tightness / impermeability. Use gloves only once. German Industry Norms (DIN) / European Norms (EN): DIN EN 374

**Skin protection**

Body protection: Lab apron. Only wear fitting, comfortable and clean protective clothing.

**Respiratory protection**

With correct and proper use, and under normal conditions, breathing protection is not required. If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn. Suitable respiratory protective equipment: particulates filter device (DIN EN 143).

**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

Physical state: solid  
Colour: colourless



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Odour: No data available

**Test method**

pH-Value: No data available

**Changes in the physical state**

Initial boiling point and boiling range: No data available

Sublimation point: No data available

Softening point: No data available

Flash point: No data available

**Flammability**

Solid: No data available

Gas: No data available

Lower explosion limits: No data available

Upper explosion limits: No data available

Ignition temperature: No data available

**Auto-ignition temperature**

Solid: No data available

Gas: No data available

Vapour pressure: No data available

Vapour pressure: No data available

Density: No data available

Water solubility: No data available

Partition coefficient: No data available

Viscosity / dynamic: No data available

Viscosity / kinematic: No data available

Flow time: No data available

Vapour density: No data available

Evaporation rate: No data available

Solvent separation test: No data available

Solvent content: No data available

**9.2. Other information**

Solid content: No data available

**SECTION 10: Stability and reactivity**

**10.1. Reactivity**

No data available

**10.3. Possibility of hazardous reactions**

No data available

**10.4. Conditions to avoid**

No data available

**10.5. Incompatible materials**

Oxidizing agents, strong.

**10.6. Hazardous decomposition products**

No data available

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**SECTION 11: Toxicological information**

**11.1. Information on toxicological effects**

**Toxicokinetics, metabolism and distribution**

Toxicological data are not available.

**Acute toxicity**

Acute toxicity, oral. Acute toxicity, dermal.

CAS No	Chemical name				
	Exposure routes	Method	Dose	Species	Source
-	salts of oxalic acid with the exception of those specified elsewhere in this Annex				
	oral	ATE	500 mg/kg		
	dermal	ATE	1100 mg/kg		

**Irritation and corrosivity**

No data available

**Sensitising effects**

No data available

**Severe effects after repeated or prolonged exposure**

No data available

**Carcinogenic/mutagenic/toxic effects for reproduction**

Due to missing data no statement can be made whether the substance fulfills the criteria of CMR categories 1 or 2. Practical experiences do not give any evidence for CMR activity of categories 1 or 2.

**Specific effects in experiment on an animal**

No data available

**Additional information on tests**

The classification was carried out according to the calculation method of the Preparations Directive (1999/45/EC).

**Practical experience**

**Observations relevant to classification**

No data available

**SECTION 12: Ecological information**

**12.1. Toxicity**

No data available

**12.2. Persistence and degradability**

No data available

**12.3. Bioaccumulative potential**

No data available

**12.4. Mobility in soil**

No data available

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

No data available

**12.6. Other adverse effects**

No data available

**Further information**

Do not allow to enter into surface water or drains. The classification was carried out according to the calculation method of the Preparations Directive (1999/45/EC).

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**SECTION 13: Disposal considerations****13.1. Waste treatment methods****Advice on disposal**

Dispose of waste according to applicable legislation.

**Waste disposal number of waste from residues/unused products**

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals  
Classified as hazardous waste.

**Waste disposal number of used product**

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals  
Classified as hazardous waste.

**Waste disposal number of contaminated packaging**

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by dangerous substances  
Classified as hazardous waste.

**Contaminated packaging**

Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself.

**SECTION 14: Transport information****Land transport (ADR/RID)****Other applicable information (land transport)**

No dangerous good in sense of these transport regulations.

**Inland waterways transport (ADN)****Other applicable information (inland waterways transport)**

No dangerous good in sense of these transport regulations.

**Marine transport (IMDG)****Other applicable information (marine transport)**

No dangerous good in sense of these transport regulations.

**Air transport (ICAO)****Other applicable information (air transport)**

No dangerous good in sense of these transport regulations.

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: no

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****EU regulatory information****Additional information**

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

**National regulatory information**

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Water contaminating class (D): 3 - highly water contaminating

### SECTION 16: Other information

#### Relevant R-phrases (Number and full text)

21/22 Harmful in contact with skin and if swallowed.

#### Relevant H- and EUH-phrases (Number and full text)

H302 Harmful if swallowed.

H312 Harmful in contact with skin.

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### Silver nitrate solution 0,01 mol/l, 50 ml

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

##### 1.1. Product identifier

Silver nitrate solution 0,01 mol/l, 50 ml

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

###### Use of the substance/mixture

Laboratory chemicals

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

###### Seller

Company name: CONATEX-DIDACTIC Lehrmittel GmbH  
 Street: Im Forstgarten 1  
 Place: D-66459 Kirkel  
 Internet: www.conatex.com

###### Supplier

Company name: Carbolution Chemicals GmbH  
 Street: Im Stadtwald, Gebäude A1.2  
 Place: D-66123 Saarbrücken  
 Contact person: Dr. Michael Bauer Telephone: +49 (0)681 302-71232  
 e-mail: michael.bauer@carbolution-chemicals.de  
 Internet: www.carbolution-chemicals.de

##### 1.4. Emergency telephone number: +49 (0)681 302-71232

#### SECTION 2: Hazards identification

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

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

This mixture is not classified as hazardous according to Directive 1999/45/EC.

This mixture is classified as not hazardous according to Regulation (EC) 1272/2008 [GHS].

##### 2.2. Label elements

###### Additional advice on labelling

According to EC directives or the corresponding national regulations the product does not have to be labelled.

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

##### 3.2. Mixtures

###### Hazardous components

EC No	Chemical name	Quantity
CAS No	Classification according to Directive 67/548/EEC	
Index No	Classification according to Regulation (EC) No. 1272/2008 [CLP]	
REACH No		
231-853-9	silver nitrate	
7761-88-8	O - Oxidizing, C - Corrosive, N - Dangerous for the environment R8-34-50-53	
047-001-00-2	Ox. Sol. 2, Skin Corr. 1B, Aquatic Acute 1 (M-Factor = 1), Aquatic Chronic 1 (M-Factor = 1); H272 H314 H400 H410	

Full text of R-, H- and EUH-phrases: see section 16.

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### Silver nitrate solution 0,01 mol/l, 50 ml

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#### SECTION 4: First aid measures

##### 4.1. Description of first aid measures

###### **After inhalation**

Provide fresh air.

###### **After contact with skin**

Wash with plenty of water. Change contaminated clothing.

###### **After contact with eyes**

Rinse immediately carefully and thoroughly with eye-bath or water.

###### **After ingestion**

Rinse mouth immediately and drink plenty of water.

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

No data available

#### SECTION 5: Firefighting measures

##### 5.1. Extinguishing media

###### **Suitable extinguishing media**

Co-ordinate fire-fighting measures to the fire surroundings.

##### 5.2. Special hazards arising from the substance or mixture

The product itself does not burn.

##### 5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.

##### **Additional information**

Contaminated fire-fighting water must be collected separately. Do not allow to enter into surface water or drains.

#### SECTION 6: Accidental release measures

##### 6.1. Personal precautions, protective equipment and emergency procedures

Avoid generation of dust. Do not breathe dust.

##### 6.2. Environmental precautions

Do not allow to enter into surface water or drains.

##### 6.3. Methods and material for containment and cleaning up

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).  
Treat the recovered material as prescribed in the section on waste disposal.

#### SECTION 7: Handling and storage

##### 7.1. Precautions for safe handling

###### **Advice on safe handling**

If handled uncovered, arrangements with local exhaust ventilation have to be used.

###### **Advice on protection against fire and explosion**

Only use the material in places where open light, fire and other flammable sources can be kept away.

##### 7.2. Conditions for safe storage, including any incompatibilities

###### **Requirements for storage rooms and vessels**

Keep container tightly closed.

##### 7.3. Specific end use(s)

No data available

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### Silver nitrate solution 0,01 mol/l, 50 ml

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#### SECTION 8: Exposure controls/personal protection

##### 8.1. Control parameters

###### Exposure limits (EH40)

CAS No	Substance	ppm	mg/m <sup>3</sup>	fibres/ml	Category	Origin
-	Silver (soluble compounds as Ag)	-	0.01		TWA (8 h)	WEL
		-	-		STEL (15 min)	WEL

##### 8.2. Exposure controls

###### Protective and hygiene measures

Change contaminated clothing. Wash hands before breaks and after work. When using do not eat or drink.

###### Eye/face protection

Eye protection: Tightly sealed safety glasses. German Industry Norms (DIN) / European Norms (EN): DIN EN 166

###### Hand protection

Hand protection: Single-use gloves. Before using check leak tightness / impermeability. Use gloves only once. German Industry Norms (DIN) / European Norms (EN): DIN EN 374

###### Skin protection

Body protection: Lab apron. Only wear fitting, comfortable and clean protective clothing.

###### Respiratory protection

With correct and proper use, and under normal conditions, breathing protection is not required. If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn. Suitable respiratory protective equipment: particulates filter device (DIN EN 143).

#### SECTION 9: Physical and chemical properties

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

Physical state: liquid  
 Colour: colourless  
 Odour: No data available

##### Test method

pH-Value: No data available

###### Changes in the physical state

Initial boiling point and boiling range: No data available

Sublimation point: No data available

Softening point: No data available

Flash point: No data available

###### Flammability

Solid: No data available

Gas: No data available

Lower explosion limits: No data available

Upper explosion limits: No data available

Ignition temperature: No data available

###### Auto-ignition temperature

Solid: No data available

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**Silver nitrate solution 0,01 mol/l, 50 ml**

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Gas:	No data available
Vapour pressure:	No data available
Vapour pressure:	No data available
Density:	No data available
Water solubility:	No data available
Partition coefficient:	No data available
Viscosity / dynamic:	No data available
Viscosity / kinematic:	No data available
Flow time:	No data available
Vapour density:	No data available
Evaporation rate:	No data available
Solvent separation test:	No data available
Solvent content:	No data available

**9.2. Other information**

Solid content:	No data available
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**SECTION 10: Stability and reactivity**

**10.1. Reactivity**

No data available

**10.3. Possibility of hazardous reactions**

No data available

**10.4. Conditions to avoid**

No data available

**10.5. Incompatible materials**

Oxidizing agents, strong.

**10.6. Hazardous decomposition products**

No data available

**SECTION 11: Toxicological information**

**11.1. Information on toxicological effects**

**Toxicokinetics, metabolism and distribution**

Toxicological data are not available.

**Acute toxicity**

Toxicological data are not available.

**Irritation and corrosivity**

No data available

**Sensitising effects**

No data available

**Severe effects after repeated or prolonged exposure**

No data available

**Carcinogenic/mutagenic/toxic effects for reproduction**

Due to missing data no statement can be made whether the substance fulfills the criteria of CMR categories 1 or 2. Practical experiences do not give any evidence for CMR activity of categories 1 or 2.



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**Silver nitrate solution 0,01 mol/l, 50 ml**

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**Specific effects in experiment on an animal**

No data available

**Additional information on tests**

The classification was carried out according to the calculation method of the Preparations Directive (1999/45/EC).

**Practical experience****Observations relevant to classification**

No data available

**Other observations**

No data available

**SECTION 12: Ecological information****12.1. Toxicity**

No data available

**12.2. Persistence and degradability**

No data available

**12.3. Bioaccumulative potential**

No data available

**12.4. Mobility in soil**

No data available

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

No data available

**12.6. Other adverse effects**

No data available

**Further information**

The classification was carried out according to the calculation method of the Preparations Directive (1999/45/EC).

**SECTION 13: Disposal considerations****13.1. Waste treatment methods****Advice on disposal**

Dispose of waste according to applicable legislation.

**Waste disposal number of waste from residues/unused products**

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals  
Classified as hazardous waste.

**Waste disposal number of used product**

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals  
Classified as hazardous waste.

**Waste disposal number of contaminated packaging**

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by dangerous substances  
Classified as hazardous waste.

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**Silver nitrate solution 0,01 mol/l, 50 ml**

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**Contaminated packaging**

Water (with cleaning agent). Completely emptied packages can be recycled.

**SECTION 14: Transport information**

**Land transport (ADR/RID)**

**Other applicable information (land transport)**

Not a hazardous material with respect to these transportation regulations.

**Inland waterways transport (ADN)**

**Other applicable information (inland waterways transport)**

Not a hazardous material with respect to these transportation regulations.

**Marine transport (IMDG)**

**Other applicable information (marine transport)**

Not a hazardous material with respect to these transportation regulations.

**Air transport (ICAO)**

**Other applicable information (air transport)**

Not a hazardous material with respect to these transportation regulations.

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: no

**SECTION 15: Regulatory information**

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

**EU regulatory information**

**Additional information**

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

**National regulatory information**

Water contaminating class (D): -- not water contaminating

**15.2. Chemical safety assessment**

For this substance a chemical safety assessment has not been carried out.

**SECTION 16: Other information**

**Relevant R-phrases (Number and full text)**

- |    |   |
|----|---|
| 08 | Contact with combustible material may cause fire.               |
| 34 | Causes burns.   |
| 50 | Very toxic to aquatic organisms.                                |
| 53 | May cause long-term adverse effects in the aquatic environment. |

**Relevant H- and EUH-phrases (Number and full text)**

- |      |   |
|------|---|
| H272 | May intensify fire; oxidiser.                         |
| H314 | Causes severe skin burns and eye damage.              |
| H400 | Very toxic to aquatic life.                           |
| H410 | Very toxic to aquatic life with long lasting effects. |

*(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)*

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**Sodium molybdate, 250 g**

Print date: 15.04.2015

Product code: 9992067d

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Sodium molybdate, 250 g

CAS No: 10102-40-6  
EC No: 231-551-7**1.2. Relevant identified uses of the substance or mixture and uses advised against****Use of the substance/mixture**

Laboratory chemicals

**1.3. Details of the supplier of the safety data sheet****Seller**Company name: CONATEX-DIDACTIC Lehrmittel GmbH  
Street: Im Forstgarten 1  
Place: D-66459 Kirkel  
Internet: www.conatex.com**Supplier**Company name: Carbolution Chemicals GmbH  
Street: Im Stadtwald, Gebäude A1.2  
Place: D-66123 Saarbrücken  
Contact person: Dr. Michael Bauer Telephone: +49 (0)681 302-71232  
e-mail: michael.bauer@carbolution-chemicals.de  
Internet: www.carbolution-chemicals.de**1.4. Emergency telephone number:** +49 (0)681 302-71232**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture**

The preparation is not dangerous in the sense of Directive 1999/45/EC.

**Classification according to Regulation (EC) No. 1272/2008 [CLP]**

This substance is not classified as hazardous according to Regulation (EC) No. 1272/2008.

**2.2. Label elements****Additional advice on labelling**

According to EC directives or the corresponding national regulations the product does not have to be labelled.

**SECTION 3: Composition/information on ingredients****3.1. Substances**Sum formula:  $\text{MoNa}_2\text{O}_4 \cdot 2\text{H}_2\text{O}$   
Molecular weight: 241,95**SECTION 4: First aid measures****4.1. Description of first aid measures****After inhalation**

Provide fresh air.

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**Sodium molybdate, 250 g**

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**After contact with skin**

Wash with plenty of water. Change contaminated clothing.

**After contact with eyes**

Rinse immediately carefully and thoroughly with eye-bath or water.

**After ingestion**

Rinse mouth immediately and drink plenty of water.

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

No data available

**SECTION 5: Firefighting measures****5.1. Extinguishing media****Suitable extinguishing media**

Co-ordinate fire-fighting measures to the fire surroundings.

**5.2. Special hazards arising from the substance or mixture**

The product itself does not burn.

**5.3. Advice for firefighters**

In case of fire: Wear self-contained breathing apparatus.

**Additional information**

Contaminated fire-fighting water must be collected separately. Do not allow to enter into surface water or drains.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**

Avoid generation of dust. Do not breathe dust.

**6.2. Environmental precautions**

Do not allow to enter into surface water or drains.

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

Take up mechanically. Treat the recovered material as prescribed in the section on waste disposal.

**SECTION 7: Handling and storage****7.1. Precautions for safe handling****Advice on safe handling**

If handled uncovered, arrangements with local exhaust ventilation have to be used.

**Advice on protection against fire and explosion**

Only use the material in places where open light, fire and other flammable sources can be kept away.

**7.2. Conditions for safe storage, including any incompatibilities****Requirements for storage rooms and vessels**

Keep container tightly closed.

**7.3. Specific end use(s)**

No data available

**SECTION 8: Exposure controls/personal protection****8.1. Control parameters****8.2. Exposure controls****Protective and hygiene measures**

Change contaminated clothing. Wash hands before breaks and after work. When using do not eat or

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**Sodium molybdate, 250 g**

Print date: 15.04.2015

Product code: 9992067d

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drink.

**Eye/face protection**

Eye protection: Tightly sealed safety glasses. German Industry Norms (DIN) / European Norms (EN): DIN EN 166

**Hand protection**

Hand protection: Single-use gloves. Before using check leak tightness / impermeability. Use gloves only once. German Industry Norms (DIN) / European Norms (EN): DIN EN 374

**Skin protection**

Body protection: Lab apron. Only wear fitting, comfortable and clean protective clothing.

**Respiratory protection**

With correct and proper use, and under normal conditions, breathing protection is not required. If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn. Suitable respiratory protective equipment: particulates filter device (DIN EN 143).

**SECTION 9: Physical and chemical properties**

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

Physical state: solid  
 Colour: colourless  
 Odour: No data available

**Test method**

pH-Value: No data available

**Changes in the physical state**

Melting point: 100 °C  
 Initial boiling point and boiling range: No data available  
 Sublimation point: No data available  
 Softening point: No data available  
 Flash point: No data available

**Flammability**

Solid: No data available  
 Gas: No data available

Lower explosion limits: No data available  
 Upper explosion limits: No data available  
 Ignition temperature: No data available

**Auto-ignition temperature**

Solid: No data available  
 Gas: No data available

Vapour pressure: No data available  
 Vapour pressure: No data available

Density: 2,37 g/cm<sup>3</sup>

Water solubility: No data available

Partition coefficient: No data available

Viscosity / dynamic: No data available

Viscosity / kinematic: No data available

Flow time: No data available

Vapour density: No data available

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**Sodium molybdate, 250 g**

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Evaporation rate: No data available  
Solvent separation test: No data available  
Solvent content: No data available

**9.2. Other information**

Solid content: No data available

**SECTION 10: Stability and reactivity****10.1. Reactivity**

No data available

**10.3. Possibility of hazardous reactions**

No data available

**10.4. Conditions to avoid**

No data available

**10.5. Incompatible materials**

Oxidizing agents, strong.

**10.6. Hazardous decomposition products**

No data available

**SECTION 11: Toxicological information****11.1. Information on toxicological effects****Toxicokinetics, metabolism and distribution**

Toxicological data are not available.

**Acute toxicity**

Toxicological data are not available.

**Irritation and corrosivity**

No data available

**Sensitising effects**

No data available

**Severe effects after repeated or prolonged exposure**

No data available

**Carcinogenic/mutagenic/toxic effects for reproduction**

Due to missing data no statement can be made whether the substance fulfills the criteria of CMR categories 1 or 2. Practical experiences do not give any evidence for CMR activity of categories 1 or 2.

**Specific effects in experiment on an animal**

No data available

**Additional information on tests**

The classification was carried out according to the calculation method of the Preparations Directive (1999/45/EC).

**Practical experience****Observations relevant to classification**

No data available

**Other observations**

No data available

**SECTION 12: Ecological information**

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**12.1. Toxicity**

No data available

**12.2. Persistence and degradability**

No data available

**12.3. Bioaccumulative potential**

No data available

**12.4. Mobility in soil**

No data available

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

No data available

**12.6. Other adverse effects**

No data available

**Further information**

The classification was carried out according to the calculation method of the Preparations Directive (1999/45/EC).

**SECTION 13: Disposal considerations****13.1. Waste treatment methods****Advice on disposal**

Dispose of waste according to applicable legislation.

**Waste disposal number of waste from residues/unused products**

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals  
Classified as hazardous waste.

**Waste disposal number of used product**

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals  
Classified as hazardous waste.

**Waste disposal number of contaminated packaging**

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by dangerous substances  
Classified as hazardous waste.

**Contaminated packaging**

Water (with cleaning agent). Completely emptied packages can be recycled.

**SECTION 14: Transport information****Land transport (ADR/RID)****Other applicable information (land transport)**

Not a hazardous material with respect to these transportation regulations.

**Inland waterways transport (ADN)****Other applicable information (inland waterways transport)**

Not a hazardous material with respect to these transportation regulations.

**Marine transport (IMDG)****Other applicable information (marine transport)**

Not a hazardous material with respect to these transportation regulations.

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### Sodium molybdate, 250 g

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#### Air transport (ICAO)

##### Other applicable information (air transport)

Not a hazardous material with respect to these transportation regulations.

#### 14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

### SECTION 15: Regulatory information

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

##### EU regulatory information

##### Additional information

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

##### National regulatory information

Water contaminating class (D): -- not water contaminating

#### 15.2. Chemical safety assessment

For this substance a chemical safety assessment has not been carried out.

### SECTION 16: Other information



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**Nessler reagent, 250 ml**

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Nessler reagent, 250 ml

**1.2. Relevant identified uses of the substance or mixture and uses advised against****Use of the substance/mixture**

Laboratory chemicals

**1.3. Details of the supplier of the safety data sheet****Seller**

Company name: CONATEX-DIDACTIC Lehrmittel GmbH  
Street: Im Forstgarten 1  
Place: D-66459 Kirkel  
Internet: www.conatex.com

**Supplier**

Company name: Carbolution Chemicals GmbH  
Street: Im Stadtwald, Gebäude A1.2  
Place: D-66123 Saarbrücken  
Contact person: Dr. Michael Bauer Telephone: +49 (0)681 302-71232  
e-mail: michael.bauer@carbolution-chemicals.de  
Internet: www.carbolution-chemicals.de

**1.4. Emergency telephone number:** +49 (0)681 302-71232**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****Classification according to Directive 67/548/EEC or 1999/45/EC**

Indications of danger: T - Toxic, C - Corrosive, Xn - Harmful  
R phrases:  
Toxic if swallowed.  
Causes severe burns.  
Harmful: danger of serious damage to health by prolonged exposure in contact with skin and if swallowed.  
Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
Possible risks of irreversible effects.

**Classification according to Regulation (EC) No. 1272/2008 [CLP]**

Hazard categories:  
Acute toxicity: Acute Tox. 2  
Skin corrosion/irritation: Skin Corr. 1A  
Germ cell mutagenicity: Muta. 2  
Specific target organ toxicity - repeated exposure: STOT RE 2  
Hazardous to the aquatic environment: Aquatic Chronic 3  
Hazard Statements:  
Fatal if swallowed.  
Causes severe skin burns and eye damage.  
Suspected of causing genetic defects.  
May cause damage to organs through prolonged or repeated exposure.  
Harmful to aquatic life with long lasting effects.

**2.2. Label elements**

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Signal word:

Danger

Pictograms:

GHS05-GHS06-GHS08



**Hazard statements**

- |      |  |
|------|--|
| H300 | Fatal if swallowed.  |
| H314 | Causes severe skin burns and eye damage.                           |
| H341 | Suspected of causing genetic defects.                              |
| H373 | May cause damage to organs through prolonged or repeated exposure. |
| H412 | Harmful to aquatic life with long lasting effects.                 |

**Precautionary statements**

- |                |  |
|----------------|--|
| P101           | If medical advice is needed, have product container or label at hand.  |
| P273           | Avoid release to the environment.  |
| P280           | Wear protective gloves/protective clothing/eye protection/face protection.   |
| P301+P310      | IF SWALLOWED: Immediately call a POISON CENTER/doctor.   |
| P305+P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P310           | Immediately call a POISON CENTER/doctor.   |

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

**3.2. Mixtures**

**Hazardous components**

EC No	Chemical name	Quantity
CAS No	Classification according to Directive 67/548/EEC	
Index No	Classification according to Regulation (EC) No. 1272/2008 [CLP]	
REACH No		
215-185-5	Sodium hydroxide; caustic soda	10 - < 15 %
1310-73-2	C - Corrosive R35	
011-002-00-6	Skin Corr. 1A; H314	
231-659-4	Potassium iodide	1 - < 5 %
7681-11-0	Xn - Harmful, Xi - Irritant R22-36/38	
	Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2; H302 H315 H319	
231-299-8	mercury dichloride; mercuric chloride	1 - < 5 %
7487-94-7	Muta. Cat. 3, Repr. Cat. 3, T+ - Very toxic, T - Toxic, C - Corrosive, N - Dangerous for the environment R68-62-28-48/24/25-34-50-53	
080-010-00-X	Muta. 2, Repr. 2, Acute Tox. 2, STOT RE 1, Skin Corr. 1B, Aquatic Acute 1 (M-Factor = 1), Aquatic Chronic 1 (M-Factor = 1); H341 H361f *** H300 H372 ** H314 H400 H410	

Full text of R-, H- and EUH-phrases: see section 16.

**SECTION 4: First aid measures**

**4.1. Description of first aid measures**

**General information**

First aider: Pay attention to self-protection! Move victim out of danger zone.

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**After inhalation**

Provide fresh air. Medical treatment necessary.

**After contact with skin**

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Medical treatment necessary.

**After contact with eyes**

In case of contact with eyes, rinse immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Subsequently consult an ophthalmologist.

**After ingestion**

Rinse mouth immediately and drink plenty of water. Do NOT induce vomiting. Potential hazards: Stomach perforation. Call a physician immediately.

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

No data available

**SECTION 5: Firefighting measures****5.1. Extinguishing media****Suitable extinguishing media**

Co-ordinate fire-fighting measures to the fire surroundings.

**5.2. Special hazards arising from the substance or mixture**

The product itself does not burn.

**5.3. Advice for firefighters**

Wear a self-contained breathing apparatus and chemical protective clothing. Full protective suit.

**Additional information**

Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**

Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Wear personal protection equipment.

**6.2. Environmental precautions**

Do not allow to enter into surface water or drains.

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

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

**SECTION 7: Handling and storage****7.1. Precautions for safe handling****Advice on safe handling**

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

**Advice on protection against fire and explosion**

Only use the material in places where open light, fire and other flammable sources can be kept away.

**7.2. Conditions for safe storage, including any incompatibilities****Requirements for storage rooms and vessels**

Keep container tightly closed. Keep locked up. Store in a place accessible by authorized persons only. Provide adequate ventilation as well as local exhaustion at critical locations.

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**SECTION 8: Exposure controls/personal protection**

**8.1. Control parameters**

**Exposure limits (EH40)**

CAS No	Substance	ppm	mg/m <sup>3</sup>	fibres/ml	Category	Origin
-	Mercury: divalent inorganic mercury compounds including mercuric oxide and mercuric chloride (measured as mercury)	-	0.02		TWA (8 h)	
1310-73-2	Sodium hydroxide	-	-		STEL (15 min)	
		-	-		TWA (8 h)	WEL
		-	2		STEL (15 min)	WEL

**8.2. Exposure controls**

**Appropriate engineering controls**

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

**Protective and hygiene measures**

Remove contaminated, saturated clothing immediately. Protect skin by using skin protective cream. After work, wash hands and face. When using do not eat or drink.

**Eye/face protection**

Eye protection: Tightly sealed safety glasses. German Industry Norms (DIN) / European Norms (EN): DIN EN 166

**Hand protection**

Hand protection: Single-use gloves. Before using check leak tightness / impermeability. Use gloves only once. German Industry Norms (DIN) / European Norms (EN): DIN EN 374

**Skin protection**

Body protection: Lab apron. Only wear fitting, comfortable and clean protective clothing.

**Respiratory protection**

With correct and proper use, and under normal conditions, breathing protection is not required. If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn. Suitable respiratory protective equipment: particulates filter device (DIN EN 143).

**SECTION 9: Physical and chemical properties**

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

Physical state: liquid  
 Colour: colourless  
 Odour: No data available

**Test method**

pH-Value: No data available

**Changes in the physical state**

Initial boiling point and boiling range: No data available  
 Sublimation point: No data available  
 Softening point: No data available  
 Flash point: No data available

**Flammability**

Solid: No data available

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Gas:	No data available
Lower explosion limits:	No data available
Upper explosion limits:	No data available
Ignition temperature:	No data available
<b>Auto-ignition temperature</b>	
Solid:	No data available
Gas:	No data available
Vapour pressure:	No data available
Vapour pressure:	No data available
Density (at 20 °C):	1,15 g/cm <sup>3</sup>
Water solubility:	No data available
Partition coefficient:	No data available
Viscosity / dynamic:	No data available
Viscosity / kinematic:	No data available
Flow time:	No data available
Vapour density:	No data available
Evaporation rate:	No data available
Solvent separation test:	No data available
Solvent content:	No data available
<b><u>9.2. Other information</u></b>	
Solid content:	No data available

**SECTION 10: Stability and reactivity**

**10.1. Reactivity**

No data available

**10.3. Possibility of hazardous reactions**

No data available

**10.4. Conditions to avoid**

No data available

**10.5. Incompatible materials**

Oxidizing agents, strong.

**10.6. Hazardous decomposition products**

No data available

**SECTION 11: Toxicological information**

**11.1. Information on toxicological effects**

**Toxicokinetics, metabolism and distribution**

Toxicological data are not available.

**Acute toxicity**

Toxic. Acute toxicity, oral. Acute toxicity, dermal.

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

<b>Nessler reagent, 250 ml</b>	
Print date: 15.04.2015	Product code: 9992067e <span style="float: right;">Page 6 of 9</span>

CAS No	Chemical name				
	Exposure routes	Method	Dose	Species	Source
7681-11-0	Potassium iodide				
	oral	ATE	500 mg/kg		
7487-94-7	mercury dichloride; mercuric chloride				
	oral	LD50	1 mg/kg	Ratte	

### Irritation and corrosivity

after ingestion: Irritant and corrosive effects. Potential hazards: Stomach perforation.

### Sensitising effects

No data available

### Severe effects after repeated or prolonged exposure

Danger of serious damage to health by prolonged exposure.

### Carcinogenic/mutagenic/toxic effects for reproduction

May cause heritable genetic damage.

### Specific effects in experiment on an animal

No data available

### Additional information on tests

The classification was carried out according to the calculation method of the Preparations Directive (1999/45/EC).

### Practical experience

### Observations relevant to classification

No data available

## SECTION 12: Ecological information

### 12.1. Toxicity

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

CAS No	Chemical name				
	Aquatic toxicity	Method	Dose	[h]   [d] Species	Source
1310-73-2	Sodium hydroxide; caustic soda				
	Acute fish toxicity	LC50	45,4 mg/l	96 h Onchorhynchus mykiss	
7487-94-7	mercury dichloride; mercuric chloride				
	Acute fish toxicity	LC50	0,13 mg/l	96 h Leuciscus idus	

### 12.2. Persistence and degradability

No data available

### 12.3. Bioaccumulative potential

No data available

### 12.4. Mobility in soil

No data available

### 12.5. Results of PBT and vPvB assessment

No data available

### 12.6. Other adverse effects

No data available

### Further information

Do not allow to enter into surface water or drains. The classification was carried out according to the calculation method of the Preparations Directive (1999/45/EC).

**Safety Data Sheet**

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**Nessler reagent, 250 ml**

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**SECTION 13: Disposal considerations**

**13.1. Waste treatment methods**

**Advice on disposal**

Dispose of waste according to applicable legislation.

**Waste disposal number of waste from residues/unused products**

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals  
Classified as hazardous waste.

**Waste disposal number of used product**

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals  
Classified as hazardous waste.

**Waste disposal number of contaminated packaging**

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by dangerous substances  
Classified as hazardous waste.

**Contaminated packaging**

Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself.

**SECTION 14: Transport information**

**Land transport (ADR/RID)**

**14.1. UN number:** UN2922  
**14.2. UN proper shipping name:** CORROSIVE LIQUID, TOXIC, N.O.S.  
**14.3. Transport hazard class(es):** 8  
**14.4. Packing group:** II  
Hazard label: 8+6.1  
Classification code: CT1  
Special Provisions: 274  
Limited quantity: 1 L  
Transport category: 2  
Hazard No: 86  
Tunnel restriction code: E

**Other applicable information (land transport)**

E2

**Inland waterways transport (ADN)**

**14.1. UN number:** UN2922  
**14.2. UN proper shipping name:** CORROSIVE LIQUID, TOXIC, N.O.S.  
**14.3. Transport hazard class(es):** 8  
**14.4. Packing group:** II  
Hazard label: 8+6.1  
Classification code: CT1  
Special Provisions: 274 802  
Limited quantity: 1 L

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**Other applicable information (inland waterways transport)**

E2

**Marine transport (IMDG)**

<b>14.1. UN number:</b>	UN2922
<b>14.2. UN proper shipping name:</b>	CORROSIVE LIQUID, TOXIC, N.O.S.
<b>14.3. Transport hazard class(es):</b>	8
<b>14.4. Packing group:</b>	II
Hazard label:	8+6.1
Special Provisions:	274
Limited quantity:	1 L
EmS:	F-A, S-B

**Other applicable information (marine transport)**

E2

**Air transport (ICAO)**

<b>14.1. UN number:</b>	UN2922
<b>14.2. UN proper shipping name:</b>	CORROSIVE LIQUID, TOXIC, N.O.S.
<b>14.3. Transport hazard class(es):</b>	8
<b>14.4. Packing group:</b>	II
Hazard label:	8+6.1
Special Provisions:	A3 A803
Limited quantity Passenger:	0.5 L
IATA-packing instructions - Passenger:	851
IATA-max. quantity - Passenger:	1 L
IATA-packing instructions - Cargo:	855
IATA-max. quantity - Cargo:	30 L

**Other applicable information (air transport)**

E2

: Y840

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: yes

**SECTION 15: Regulatory information**

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

**EU regulatory information**

**Additional information**

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

**National regulatory information**

Water contaminating class (D): 3 - highly water contaminating

**SECTION 16: Other information**

**Relevant R-phrases (Number and full text)**

22	Harmful if swallowed.
28	Very toxic if swallowed.
34	Causes burns.
35	Causes severe burns.
36/38	Irritating to eyes and skin.
48/24/25	Toxic: danger of serious damage to health by prolonged exposure in contact with skin and if



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- swallowed.
- 50 Very toxic to aquatic organisms.
- 53 May cause long-term adverse effects in the aquatic environment.
- 62 Possible risk of impaired fertility.
- 68 Possible risks of irreversible effects.

**Relevant H- and EUH-phrases (Number and full text)**

- H300 Fatal if swallowed.
- H302 Harmful if swallowed.
- H314 Causes severe skin burns and eye damage.
- H315 Causes skin irritation.
- H319 Causes serious eye irritation.
- H341 Suspected of causing genetic defects.
- H361f Suspected of damaging fertility.
- H372 Causes damage to organs through prolonged or repeated exposure.
- 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.
- H412 Harmful to aquatic life with long lasting effects.

---

*(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)*

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**Sodium oxalate, 100 g**

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Product code: 9992067f

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Sodium oxalate, 100 g

CAS No: 62-76-0  
Index No: 607-007-00-3  
EC No: 200-550-3

**1.2. Relevant identified uses of the substance or mixture and uses advised against****Use of the substance/mixture**

Laboratory chemicals

**1.3. Details of the supplier of the safety data sheet****Seller**

Company name: CONATEX-DIDACTIC Lehrmittel GmbH  
Street: Im Forstgarten 1  
Place: D-66459 Kirkel  
Internet: www.conatex.com

**Supplier**

Company name: Carbolution Chemicals GmbH  
Street: Im Stadtwald, Gebäude A1.2  
Place: D-66123 Saarbrücken  
Contact person: Dr. Michael Bauer Telephone: +49 (0)681 302-71232  
e-mail: michael.bauer@carbolution-chemicals.de  
Internet: www.carbolution-chemicals.de

**1.4. Emergency telephone number:** +49 (0)681 302-71232**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****Classification according to Directive 67/548/EEC or 1999/45/EC**

Indications of danger: Xn - Harmful  
R phrases:  
Harmful in contact with skin and if swallowed.

**Classification according to Regulation (EC) No. 1272/2008 [CLP]**

Hazard categories:  
Acute toxicity: Acute Tox. 4  
Acute toxicity: Acute Tox. 4  
Hazard Statements:  
Harmful in contact with skin.  
Harmful if swallowed.

**2.2. Label elements**

Signal word: Warning  
Pictograms: GHS07



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### Sodium oxalate, 100 g

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#### Hazard statements

H302 Harmful if swallowed.  
 H312 Harmful in contact with skin.

#### Precautionary statements

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

### SECTION 3: Composition/information on ingredients

#### 3.1. Substances

Sum formula: C<sub>2</sub>Na<sub>2</sub>O<sub>4</sub>  
 Molecular weight: 134,00

#### Hazardous components

EC No	Chemical name	Quantity
CAS No	Classification according to Directive 67/548/EEC	
Index No	Classification according to Regulation (EC) No. 1272/2008 [CLP]	
-	salts of oxalic acid with the exception of those specified elsewhere in this Annex	100 %
-	Xn - Harmful R21/22	
607-007-00-3	Acute Tox. 4, Acute Tox. 4; H312 H302	

Full text of R-, H- and EUH-phrases: see section 16.

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

##### General information

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

##### After inhalation

Provide fresh air.

##### After contact with skin

Wash with plenty of water. Change contaminated clothing. Medical treatment necessary.

##### After contact with eyes

Rinse immediately carefully and thoroughly with eye-bath or water. In case of troubles or persistent symptoms, consult an ophthalmologist.

##### After ingestion

Rinse mouth immediately and drink plenty of water. Medical treatment necessary.

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

No data available

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

##### Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings.

#### 5.2. Special hazards arising from the substance or mixture

The product itself does not burn.

#### 5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.

#### Additional information

Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water

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**Sodium oxalate, 100 g**

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separately. Do not allow entering drains or surface water.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**

Provide adequate ventilation. Avoid generation of dust. Do not breathe dust. Avoid contact with skin, eyes and clothes. Wear personal protection equipment.

**6.2. Environmental precautions**

Do not allow to enter into surface water or drains.

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

Take up mechanically. Treat the recovered material as prescribed in the section on waste disposal.

**SECTION 7: Handling and storage****7.1. Precautions for safe handling****Advice on safe handling**

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe dust.

**Advice on protection against fire and explosion**

Only use the material in places where open light, fire and other flammable sources can be kept away.

**7.2. Conditions for safe storage, including any incompatibilities****Requirements for storage rooms and vessels**

Keep container tightly closed.

**SECTION 8: Exposure controls/personal protection****8.1. Control parameters****8.2. Exposure controls****Appropriate engineering controls**

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe dust.

**Protective and hygiene measures**

Remove contaminated, saturated clothing immediately. Protect skin by using skin protective cream. After work, wash hands and face. When using do not eat or drink.

**Eye/face protection**

Eye protection: Tightly sealed safety glasses. German Industry Norms (DIN) / European Norms (EN): DIN EN 166

**Hand protection**

Hand protection: Single-use gloves. Before using check leak tightness / impermeability. Use gloves only once. German Industry Norms (DIN) / European Norms (EN): DIN EN 374

**Skin protection**

Body protection: Lab apron. Only wear fitting, comfortable and clean protective clothing.

**Respiratory protection**

With correct and proper use, and under normal conditions, breathing protection is not required. If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn. Suitable respiratory protective equipment: particulates filter device (DIN EN 143).

**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

Physical state: solid  
Colour: colourless

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Odour: No data available

#### Test method

pH-Value: No data available

#### Changes in the physical state

Melting point: 250 °C

Initial boiling point and boiling range: No data available

Sublimation point: No data available

Softening point: No data available

Flash point: No data available

#### Flammability

Solid: No data available

Gas: No data available

Lower explosion limits: No data available

Upper explosion limits: No data available

Ignition temperature: No data available

#### Auto-ignition temperature

Solid: No data available

Gas: No data available

Vapour pressure: No data available

Vapour pressure: No data available

Density: 2,34 g/cm<sup>3</sup>

Water solubility:  
(at 20 °C) 13,4 g/L

Partition coefficient: No data available

Viscosity / dynamic: No data available

Viscosity / kinematic: No data available

Flow time: No data available

Vapour density: No data available

Evaporation rate: No data available

Solvent separation test: No data available

Solvent content: No data available

#### 9.2. Other information

Solid content: No data available

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

No data available

#### 10.3. Possibility of hazardous reactions

No data available

#### 10.4. Conditions to avoid

No data available

#### 10.5. Incompatible materials

Oxidizing agents, strong.

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**10.6. Hazardous decomposition products**

No data available

**SECTION 11: Toxicological information**

**11.1. Information on toxicological effects**

**Toxicocinetics, metabolism and distribution**

Toxicological data are not available.

**Acute toxicity**

Acute toxicity, oral. Acute toxicity, dermal.

CAS No	Chemical name				
	Exposure routes	Method	Dose	Species	Source
-	salts of oxalic acid with the exception of those specified elsewhere in this Annex				
	oral	ATE	500 mg/kg		
	dermal	ATE	1100 mg/kg		

**Irritation and corrosivity**

No data available

**Sensitising effects**

No data available

**Severe effects after repeated or prolonged exposure**

No data available

**Carcinogenic/mutagenic/toxic effects for reproduction**

Due to missing data no statement can be made whether the substance fulfills the criteria of CMR categories 1 or 2. Practical experiences do not give any evidence for CMR activity of categories 1 or 2.

**Specific effects in experiment on an animal**

No data available

**Additional information on tests**

The classification was carried out according to the calculation method of the Preparations Directive (1999/45/EC).

**Practical experience**

**Observations relevant to classification**

No data available

**SECTION 12: Ecological information**

**12.1. Toxicity**

No data available

**12.2. Persistence and degradability**

No data available

**12.3. Bioaccumulative potential**

No data available

**12.4. Mobility in soil**

No data available

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

No data available

**12.6. Other adverse effects**

No data available

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#### Further information

Do not allow to enter into surface water or drains. The classification was carried out according to the calculation method of the Preparations Directive (1999/45/EC).

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

##### Advice on disposal

Dispose of waste according to applicable legislation.

##### Waste disposal number of waste from residues/unused products

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals  
Classified as hazardous waste.

##### Waste disposal number of used product

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals  
Classified as hazardous waste.

##### Waste disposal number of contaminated packaging

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by dangerous substances  
Classified as hazardous waste.

##### Contaminated packaging

Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself.

### SECTION 14: Transport information

#### Land transport (ADR/RID)

##### Other applicable information (land transport)

No dangerous good in sense of these transport regulations.

#### Inland waterways transport (ADN)

##### Other applicable information (inland waterways transport)

No dangerous good in sense of these transport regulations.

#### Marine transport (IMDG)

##### Other applicable information (marine transport)

No dangerous good in sense of these transport regulations.

#### Air transport (ICAO)

##### Other applicable information (air transport)

No dangerous good in sense of these transport regulations.

#### 14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

### SECTION 15: Regulatory information

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

##### EU regulatory information

##### Additional information

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Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

#### National regulatory information

Water contaminating class (D): 3 - highly water contaminating

#### SECTION 16: Other information

##### Relevant R-phrases (Number and full text)

21/22 Harmful in contact with skin and if swallowed.

##### Relevant H- and EUH-phrases (Number and full text)

H302 Harmful if swallowed.

H312 Harmful in contact with skin.



## Safety Data Sheet

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### Potassium reagent, 1 kit

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

### 1.1. Product identifier

Potassium reagent, 1 kit

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

#### Use of the substance/mixture

Laboratory chemicals

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

#### Seller

Company name: CONATEX-DIDACTIC Lehrmittel GmbH  
Street: Im Forstgarten 1  
Place: D-66459 Kirkel  
Internet: www.conatex.com

#### Supplier

Company name: Carbolution Chemicals GmbH  
Street: Im Stadtwald, Gebäude A1.2  
Place: D-66123 Saarbrücken  
Contact person: Dr. Michael Bauer Telephone: +49 (0)681 302-71232  
e-mail: michael.bauer@carbolution-chemicals.de  
Internet: www.carbolution-chemicals.de

### 1.4. Emergency telephone number:

+49 (0)681 302-71232

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

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

Indications of danger: C - Corrosive  
R phrases:  
Causes burns.

#### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Hazard categories:  
Skin corrosion/irritation: Skin Corr. 1B  
Hazard Statements:  
Causes severe skin burns and eye damage.

### 2.2. Label elements

Signal word: Danger  
Pictograms: GHS05



#### Hazard statements

H314 Causes severe skin burns and eye damage.

#### Precautionary statements

P101 If medical advice is needed, have product container or label at hand.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.

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<b>Potassium reagent, 1 kit</b>		
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P310	Immediately call a POISON CENTER/doctor.	

### SECTION 3: Composition/information on ingredients

#### 3.2. Mixtures

##### Hazardous components

EC No	Chemical name	Quantity
CAS No	Classification according to Directive 67/548/EEC	
Index No	Classification according to Regulation (EC) No. 1272/2008 [CLP]	
REACH No		
205-605-5	Sodium tetraphenylborate	5 - < 10 %
143-66-8	Xn - Harmful R22	
	Acute Tox. 3; H301	
215-185-5	Sodium hydroxide; caustic soda	1 - < 5 %
1310-73-2	C - Corrosive R35	
011-002-00-6	Skin Corr. 1A; H314	

Full text of R-, H- and EUH-phrases: see section 16.

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

##### General information

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

##### After inhalation

Provide fresh air.

##### After contact with skin

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention.

##### After contact with eyes

In case of contact with eyes, rinse immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Subsequently consult an ophthalmologist.

##### After ingestion

Rinse mouth immediately and drink plenty of water. Do NOT induce vomiting. Potential hazards: Stomach perforation. Call a physician immediately. Do not allow a neutralisation agent to be drunk.

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

No data available

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

##### Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings.

#### 5.2. Special hazards arising from the substance or mixture

The product itself does not burn.

#### 5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing. Full protective suit.

#### Additional information

Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water

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### Potassium reagent, 1 kit

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separately. Do not allow entering drains or surface water.

#### SECTION 6: Accidental release measures

##### 6.1. Personal precautions, protective equipment and emergency procedures

Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Wear personal protection equipment.

##### 6.2. Environmental precautions

Do not allow to enter into surface water or drains.

##### 6.3. Methods and material for containment and cleaning up

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

#### SECTION 7: Handling and storage

##### 7.1. Precautions for safe handling

###### Advice on safe handling

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

###### Advice on protection against fire and explosion

Only use the material in places where open light, fire and other flammable sources can be kept away.

##### 7.2. Conditions for safe storage, including any incompatibilities

###### Requirements for storage rooms and vessels

Keep container tightly closed. Keep locked up. Store in a place accessible by authorized persons only. Provide adequate ventilation as well as local exhaustion at critical locations.

#### SECTION 8: Exposure controls/personal protection

##### 8.1. Control parameters

###### Exposure limits (EH40)

CAS No	Substance	ppm	mg/m <sup>3</sup>	fibres/ml	Category	Origin
1310-73-2	Sodium hydroxide	-	-		TWA (8 h)	WEL
		-	2		STEL (15 min)	WEL

##### 8.2. Exposure controls

###### Appropriate engineering controls

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

###### Protective and hygiene measures

Remove contaminated, saturated clothing immediately. Protect skin by using skin protective cream. After work, wash hands and face. When using do not eat or drink.

###### Eye/face protection

Eye protection: Tightly sealed safety glasses. German Industry Norms (DIN) / European Norms (EN): DIN EN 166

###### Hand protection

Hand protection: Single-use gloves. Before using check leak tightness / impermeability. Use gloves only once. German Industry Norms (DIN) / European Norms (EN): DIN EN 374

###### Skin protection

Body protection: Lab apron. Only wear fitting, comfortable and clean protective clothing.

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**Respiratory protection**

With correct and proper use, and under normal conditions, breathing protection is not required. If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn. Suitable respiratory protective equipment: particulates filter device (DIN EN 143).

**SECTION 9: Physical and chemical properties**

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

Physical state:

Colour:

pH-Value:

No data available

**Test method**

**Changes in the physical state**

Initial boiling point and boiling range:

No data available

Sublimation point:

No data available

Softening point:

No data available

Flash point:

No data available

**Flammability**

Solid:

No data available

Gas:

No data available

Lower explosion limits:

No data available

Upper explosion limits:

No data available

Ignition temperature:

No data available

**Auto-ignition temperature**

Solid:

No data available

Gas:

No data available

Vapour pressure:

No data available

Vapour pressure:

No data available

Density:

No data available

Water solubility:

No data available

Partition coefficient:

No data available

Viscosity / dynamic:

No data available

Viscosity / kinematic:

No data available

Flow time:

No data available

Vapour density:

No data available

Evaporation rate:

No data available

Solvent separation test:

No data available

Solvent content:

No data available

**9.2. Other information**

Solid content:

No data available

**SECTION 10: Stability and reactivity**

**10.1. Reactivity**

No data available

**Safety Data Sheet**

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<b>Potassium reagent, 1 kit</b>		
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**10.3. Possibility of hazardous reactions**

No data available

**10.4. Conditions to avoid**

No data available

**10.5. Incompatible materials**

Oxidizing agents, strong.

**10.6. Hazardous decomposition products**

No data available

**SECTION 11: Toxicological information**

**11.1. Information on toxicological effects**

**Toxicokinetics, metabolism and distribution**

Toxicological data are not available.

**Acute toxicity**

Toxicological data are not available.

CAS No	Chemical name				
	Exposure routes	Method	Dose	Species	Source
143-66-8	Sodium tetraphenylborate				
	oral	ATE	100 mg/kg		

**Irritation and corrosivity**

after ingestion: Irritant and corrosive effects. Potential hazards: Stomach perforation.

**Sensitising effects**

No data available

**Severe effects after repeated or prolonged exposure**

No data available

**Carcinogenic/mutagenic/toxic effects for reproduction**

Due to missing data no statement can be made whether the substance fulfills the criteria of CMR categories 1 or 2. Practical experiences do not give any evidence for CMR activity of categories 1 or 2.

**Specific effects in experiment on an animal**

No data available

**Additional information on tests**

The classification was carried out according to the calculation method of the Preparations Directive (1999/45/EC).

**Practical experience**

**Observations relevant to classification**

No data available

**SECTION 12: Ecological information**

**12.1. Toxicity**

CAS No	Chemical name					
	Aquatic toxicity	Method	Dose	[h]   [d]	Species	Source
1310-73-2	Sodium hydroxide; caustic soda					
	Acute fish toxicity	LC50	45,4 mg/l	96 h	Onchorhynchus mykiss	

**12.2. Persistence and degradability**

No data available

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**12.3. Bioaccumulative potential**

No data available

**12.4. Mobility in soil**

No data available

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

No data available

**12.6. Other adverse effects**

No data available

**Further information**

Do not allow to enter into surface water or drains. The classification was carried out according to the calculation method of the Preparations Directive (1999/45/EC).

**SECTION 13: Disposal considerations**

**13.1. Waste treatment methods**

**Advice on disposal**

Dispose of waste according to applicable legislation.

**Waste disposal number of waste from residues/unused products**

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals  
Classified as hazardous waste.

**Waste disposal number of used product**

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals  
Classified as hazardous waste.

**Waste disposal number of contaminated packaging**

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by dangerous substances  
Classified as hazardous waste.

**Contaminated packaging**

Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself.

**SECTION 14: Transport information**

**Land transport (ADR/RID)**

<b><u>14.1. UN number:</u></b>	UN3266
<b><u>14.2. UN proper shipping name:</u></b>	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S.
<b><u>14.3. Transport hazard class(es):</u></b>	8
<b><u>14.4. Packing group:</u></b>	II
Hazard label:	8
Classification code:	C5
Special Provisions:	274
Limited quantity:	1 L
Transport category:	2
Hazard No:	80
Tunnel restriction code:	E

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

<b>Potassium reagent, 1 kit</b>		
Print date: 15.04.2015	Product code: 9992067g	Page 7 of 8

**Other applicable information (land transport)**

E2

**Inland waterways transport (ADN)**

<b>14.1. UN number:</b>	UN3266
<b>14.2. UN proper shipping name:</b>	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S.
<b>14.3. Transport hazard class(es):</b>	8
<b>14.4. Packing group:</b>	II
Hazard label:	8
Classification code:	C5
Special Provisions:	274
Limited quantity:	1 L

**Other applicable information (inland waterways transport)**

E2

**Marine transport (IMDG)**

<b>14.1. UN number:</b>	UN3266
<b>14.2. UN proper shipping name:</b>	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S.
<b>14.3. Transport hazard class(es):</b>	8
<b>14.4. Packing group:</b>	II
Hazard label:	8
Special Provisions:	274
Limited quantity:	1 L
EmS:	F-A, S-B

**Other applicable information (marine transport)**

E2

**Air transport (ICAO)**

<b>14.1. UN number:</b>	UN3266
<b>14.2. UN proper shipping name:</b>	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S.
<b>14.3. Transport hazard class(es):</b>	8
<b>14.4. Packing group:</b>	II
Hazard label:	8
Special Provisions:	A3 A803
Limited quantity Passenger:	0.5 L
IATA-packing instructions - Passenger:	851
IATA-max. quantity - Passenger:	1 L
IATA-packing instructions - Cargo:	855
IATA-max. quantity - Cargo:	30 L

**Other applicable information (air transport)**

E2

: Y840

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: no

**SECTION 15: Regulatory information**

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

**EU regulatory information**

**Additional information**

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#### National regulatory information

Water contaminating class (D): 3 - highly water contaminating

#### SECTION 16: Other information

##### Relevant R-phrases (Number and full text)

22 Harmful if swallowed.  
35 Causes severe burns.

##### Relevant H- and EUH-phrases (Number and full text)

H301 Toxic if swallowed.  
H314 Causes severe skin burns and eye damage.

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*(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)*



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**Barium chloride solution 10%, 500 ml**

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Product code: 9992067h

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Barium chloride solution 10%, 500 ml

**1.2. Relevant identified uses of the substance or mixture and uses advised against****Use of the substance/mixture**

Laboratory chemicals

**1.3. Details of the supplier of the safety data sheet****Seller**

Company name: CONATEX-DIDACTIC Lehrmittel GmbH  
Street: Im Forstgarten 1  
Place: D-66459 Kirkel  
Internet: www.conatex.com

**Supplier**

Company name: Carbolution Chemicals GmbH  
Street: Im Stadtwald, Gebäude A1.2  
Place: D-66123 Saarbrücken  
Contact person: Dr. Michael Bauer Telephone: +49 (0)681 302-71232  
e-mail: michael.bauer@carbolution-chemicals.de  
Internet: www.carbolution-chemicals.de

**1.4. Emergency telephone number:**

+49 (0)681 302-71232

**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****Classification according to Directive 67/548/EEC or 1999/45/EC**

Indications of danger: Xn - Harmful  
R phrases:  
Harmful if swallowed.

**Classification according to Regulation (EC) No. 1272/2008 [CLP]**

Hazard Statements:  
Harmful if swallowed.

**2.2. Label elements**

Signal word: Warning  
Pictograms: GHS07

**Hazard statements**

H302 Harmful if swallowed.

**Precautionary statements**

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.

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

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### Barium chloride solution 10%, 500 ml

Print date: 15.04.2015

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#### 3.2. Mixtures

##### Hazardous components

EC No	Chemical name	Quantity
CAS No	Classification according to Directive 67/548/EEC	
Index No	Classification according to Regulation (EC) No. 1272/2008 [CLP]	
REACH No		
233-788-1	barium chloride	10 - < 15 %
10361-37-2	T - Toxic, Xn - Harmful R25-20	
056-004-00-8	Acute Tox. 3, Acute Tox. 4; H301 H332	

Full text of R-, H- and EUH-phrases: see section 16.

#### SECTION 4: First aid measures

##### 4.1. Description of first aid measures

###### General information

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

###### After inhalation

Provide fresh air.

###### After contact with skin

Wash with plenty of water. Change contaminated clothing.

###### After contact with eyes

Rinse immediately carefully and thoroughly with eye-bath or water. In case of troubles or persistent symptoms, consult an ophthalmologist.

###### After ingestion

Rinse mouth immediately and drink plenty of water. Medical treatment necessary.

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

No data available

#### SECTION 5: Firefighting measures

##### 5.1. Extinguishing media

###### Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings.

##### 5.2. Special hazards arising from the substance or mixture

The product itself does not burn.

##### 5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.

##### Additional information

Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

#### SECTION 6: Accidental release measures

##### 6.1. Personal precautions, protective equipment and emergency procedures

Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Wear personal protection equipment.

##### 6.2. Environmental precautions

Do not allow to enter into surface water or drains.

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### Barium chloride solution 10%, 500 ml

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

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).  
Treat the recovered material as prescribed in the section on waste disposal.

### **SECTION 7: Handling and storage**

#### **7.1. Precautions for safe handling**

##### **Advice on safe handling**

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

##### **Advice on protection against fire and explosion**

Only use the material in places where open light, fire and other flammable sources can be kept away.

#### **7.2. Conditions for safe storage, including any incompatibilities**

##### **Requirements for storage rooms and vessels**

Keep container tightly closed.

### **SECTION 8: Exposure controls/personal protection**

#### **8.1. Control parameters**

##### **Exposure limits (EH40)**

CAS No	Substance	ppm	mg/m <sup>3</sup>	fibres/ml	Category	Origin
-	Barium compounds, soluble (as Ba)	-	0.5		TWA (8 h)	WEL
		-	-		STEL (15 min)	WEL

#### **8.2. Exposure controls**

##### **Appropriate engineering controls**

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

##### **Protective and hygiene measures**

Remove contaminated, saturated clothing immediately. Protect skin by using skin protective cream.  
After work, wash hands and face. When using do not eat or drink.

##### **Eye/face protection**

Eye protection: Tightly sealed safety glasses. German Industry Norms (DIN) / European Norms (EN):  
DIN EN 166

##### **Hand protection**

Hand protection: Single-use gloves. Before using check leak tightness / impermeability. Use gloves only once. German Industry Norms (DIN) / European Norms (EN): DIN EN 374

##### **Skin protection**

Body protection: Lab apron. Only wear fitting, comfortable and clean protective clothing.

##### **Respiratory protection**

With correct and proper use, and under normal conditions, breathing protection is not required. If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn. Suitable respiratory protective equipment: particulates filter device (DIN EN 143).

### **SECTION 9: Physical and chemical properties**

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

Physical state:	liquid
Colour:	colourless
Odour:	No data available

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**Barium chloride solution 10%, 500 ml**

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**Test method**

pH-Value:	No data available
<b>Changes in the physical state</b>	
Initial boiling point and boiling range:	No data available
Sublimation point:	No data available
Softening point:	No data available
Flash point:	No data available
<b>Flammability</b>	
Solid:	No data available
Gas:	No data available
Lower explosion limits:	No data available
Upper explosion limits:	No data available
Ignition temperature:	No data available
<b>Auto-ignition temperature</b>	
Solid:	No data available
Gas:	No data available
Vapour pressure:	No data available
Vapour pressure:	No data available
Density:	No data available
Water solubility:	No data available
Partition coefficient:	No data available
Viscosity / dynamic:	No data available
Viscosity / kinematic:	No data available
Flow time:	No data available
Vapour density:	No data available
Evaporation rate:	No data available
Solvent separation test:	No data available
Solvent content:	No data available
<b><u>9.2. Other information</u></b>	
Solid content:	No data available

**SECTION 10: Stability and reactivity**

**10.1. Reactivity**

No data available

**10.3. Possibility of hazardous reactions**

No data available

**10.4. Conditions to avoid**

No data available

**10.5. Incompatible materials**

Oxidizing agents, strong.

**10.6. Hazardous decomposition products**

No data available

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

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**SECTION 11: Toxicological information**

**11.1. Information on toxicological effects**

**Toxicocinetics, metabolism and distribution**

Toxicological data are not available.

**Acute toxicity**

Acute toxicity, dermal.

CAS No	Chemical name				
	Exposure routes	Method	Dose	Species	Source
10361-37-2	barium chloride				
	oral	LD50	118 mg/kg	Ratte	
	inhalative vapour	ATE	11 mg/l		
	inhalative aerosol	ATE	1,5 mg/l		

**Irritation and corrosivity**

No data available

**Sensitising effects**

No data available

**Severe effects after repeated or prolonged exposure**

No data available

**Carcinogenic/mutagenic/toxic effects for reproduction**

Due to missing data no statement can be made whether the substance fulfills the criteria of CMR categories 1 or 2. Practical experiences do not give any evidence for CMR activity of categories 1 or 2.

**Specific effects in experiment on an animal**

No data available

**Additional information on tests**

The classification was carried out according to the calculation method of the Preparations Directive (1999/45/EC).

**Practical experience**

**Observations relevant to classification**

No data available

**SECTION 12: Ecological information**

**12.1. Toxicity**

CAS No	Chemical name					
	Aquatic toxicity	Method	Dose	[h]   [d]	Species	Source
10361-37-2	barium chloride					
	Acute fish toxicity	LC50	870 mg/l	96 h	Leuciscus idus	
	Acute crustacea toxicity	EC50	21,9 mg/l	48 h	Daphnia magna	

**12.2. Persistence and degradability**

No data available

**12.3. Bioaccumulative potential**

No data available

**12.4. Mobility in soil**

No data available

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

No data available

**12.6. Other adverse effects**

No data available

**Further information**

The classification was carried out according to the calculation method of the Preparations Directive (1999/45/EC).

**SECTION 13: Disposal considerations****13.1. Waste treatment methods****Advice on disposal**

Dispose of waste according to applicable legislation.

**Waste disposal number of waste from residues/unused products**

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals  
Classified as hazardous waste.

**Waste disposal number of used product**

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals  
Classified as hazardous waste.

**Waste disposal number of contaminated packaging**

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by dangerous substances  
Classified as hazardous waste.

**Contaminated packaging**

Water (with cleaning agent). Completely emptied packages can be recycled.

**SECTION 14: Transport information****Land transport (ADR/RID)****Other applicable information (land transport)**

No dangerous good in sense of these transport regulations.

**Inland waterways transport (ADN)****Other applicable information (inland waterways transport)**

No dangerous good in sense of these transport regulations.

**Marine transport (IMDG)****Other applicable information (marine transport)**

No dangerous good in sense of these transport regulations.

**Air transport (ICAO)****Other applicable information (air transport)**

No dangerous good in sense of these transport regulations.

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: no

**SECTION 15: Regulatory information**

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### Barium chloride solution 10%, 500 ml

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

##### **EU regulatory information**

##### **Additional information**

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

##### **National regulatory information**

Water contaminating class (D): 1 - slightly water contaminating

#### **SECTION 16: Other information**

##### **Relevant R-phrases (Number and full text)**

20 Harmful by inhalation.  
25 Toxic if swallowed.

##### **Relevant H- and EUH-phrases (Number and full text)**

H301 Toxic if swallowed.  
H302 Harmful if swallowed.  
H332 Harmful if inhaled.

*(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)*

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according to Regulation (EC) No 1907/2006

**Extracting solution, 1 I**

Print date: 15.04.2015

Product code: 9992067i

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Extracting solution, 1 I

**1.2. Relevant identified uses of the substance or mixture and uses advised against****Use of the substance/mixture**

Laboratory chemicals

**1.3. Details of the supplier of the safety data sheet****Seller**

Company name: CONATEX-DIDACTIC Lehrmittel GmbH  
Street: Im Forstgarten 1  
Place: D-66459 Kirkel  
Internet: www.conatex.com

**Supplier**

Company name: Carbolution Chemicals GmbH  
Street: Im Stadtwald, Gebäude A1.2  
Place: D-66123 Saarbrücken  
Contact person: Dr. Michael Bauer Telephone: +49 (0)681 302-71232  
e-mail: michael.bauer@carbolution-chemicals.de  
Internet: www.carbolution-chemicals.de

**1.4. Emergency telephone number:** +49 (0)681 302-71232**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****Classification according to Directive 67/548/EEC or 1999/45/EC**

This mixture is not classified as hazardous according to Directive 1999/45/EC.

The preparation is not dangerous in the sense of Directive 1999/45/EC.

**2.2. Label elements****Additional advice on labelling**

According to EC directives or the corresponding national regulations the product does not have to be labelled.

**SECTION 3: Composition/information on ingredients****3.2. Mixtures****SECTION 4: First aid measures****4.1. Description of first aid measures****After inhalation**

Provide fresh air.

**After contact with skin**

Wash with plenty of water. Change contaminated clothing.

**After contact with eyes**

Rinse immediately carefully and thoroughly with eye-bath or water.



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### Extracting solution, 1 l

Print date: 15.04.2015

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#### After ingestion

Rinse mouth immediately and drink plenty of water.

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

No data available

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

##### Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings.

#### 5.2. Special hazards arising from the substance or mixture

The product itself does not burn.

#### 5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.

#### Additional information

Contaminated fire-fighting water must be collected separately. Do not allow to enter into surface water or drains.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

Avoid generation of dust. Do not breathe dust.

#### 6.2. Environmental precautions

Do not allow to enter into surface water or drains.

#### 6.3. Methods and material for containment and cleaning up

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).  
Treat the recovered material as prescribed in the section on waste disposal.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

##### Advice on safe handling

If handled uncovered, arrangements with local exhaust ventilation have to be used.

##### Advice on protection against fire and explosion

Only use the material in places where open light, fire and other flammable sources can be kept away.

#### 7.2. Conditions for safe storage, including any incompatibilities

##### Requirements for storage rooms and vessels

Keep container tightly closed.

#### 7.3. Specific end use(s)

No data available

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

#### 8.2. Exposure controls

##### Protective and hygiene measures

Change contaminated clothing. Wash hands before breaks and after work. When using do not eat or drink.

##### Eye/face protection

Eye protection: Tightly sealed safety glasses. German Industry Norms (DIN) / European Norms (EN):  
DIN EN 166

## Safety Data Sheet

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### Extracting solution, 1 I

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#### Hand protection

Hand protection: Single-use gloves. Before using check leak tightness / impermeability. Use gloves only once. German Industry Norms (DIN) / European Norms (EN): DIN EN 374

#### Skin protection

Body protection: Lab apron. Only wear fitting, comfortable and clean protective clothing.

#### Respiratory protection

With correct and proper use, and under normal conditions, breathing protection is not required. If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn. Suitable respiratory protective equipment: particulates filter device (DIN EN 143).

## SECTION 9: Physical and chemical properties

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

Physical state:	liquid
Colour:	colourless
Odour:	No data available

#### Test method

pH-Value:	No data available
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#### Changes in the physical state

Initial boiling point and boiling range:	No data available
Sublimation point:	No data available
Softening point:	No data available
Flash point:	No data available

#### Flammability

Solid:	No data available
Gas:	No data available

Lower explosion limits:	No data available
Upper explosion limits:	No data available
Ignition temperature:	No data available

#### Auto-ignition temperature

Solid:	No data available
Gas:	No data available

Vapour pressure:	No data available
Vapour pressure:	No data available

Density:	No data available
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Water solubility:	No data available
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Partition coefficient:	No data available
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Viscosity / dynamic:	No data available
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Viscosity / kinematic:	No data available
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Flow time:	No data available
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Vapour density:	No data available
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Evaporation rate:	No data available
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Solvent separation test:	No data available
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Solvent content:	No data available
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### 9.2. Other information

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according to Regulation (EC) No 1907/2006

### Extracting solution, 1 I

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Solid content:

No data available

#### SECTION 10: Stability and reactivity

##### 10.1. Reactivity

No data available

##### 10.3. Possibility of hazardous reactions

No data available

##### 10.4. Conditions to avoid

No data available

##### 10.5. Incompatible materials

Oxidizing agents, strong.

##### 10.6. Hazardous decomposition products

No data available

#### SECTION 11: Toxicological information

##### 11.1. Information on toxicological effects

###### **Toxicokinetics, metabolism and distribution**

Toxicological data are not available.

###### **Acute toxicity**

Toxicological data are not available.

###### **Irritation and corrosivity**

No data available

###### **Sensitising effects**

No data available

###### **Severe effects after repeated or prolonged exposure**

No data available

###### **Carcinogenic/mutagenic/toxic effects for reproduction**

Due to missing data no statement can be made whether the substance fulfills the criteria of CMR categories 1 or 2. Practical experiences do not give any evidence for CMR activity of categories 1 or 2.

###### **Specific effects in experiment on an animal**

No data available

###### **Additional information on tests**

The classification was carried out according to the calculation method of the Preparations Directive (1999/45/EC).

###### **Practical experience**

###### **Observations relevant to classification**

No data available

###### **Other observations**

No data available

#### SECTION 12: Ecological information

##### 12.1. Toxicity

No data available

##### 12.2. Persistence and degradability

No data available

##### 12.3. Bioaccumulative potential

**Safety Data Sheet**

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No data available

**12.4. Mobility in soil**

No data available

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

No data available

**12.6. Other adverse effects**

No data available

**Further information**

The classification was carried out according to the calculation method of the Preparations Directive (1999/45/EC).

**SECTION 13: Disposal considerations****13.1. Waste treatment methods****Advice on disposal**

Dispose of waste according to applicable legislation.

**Waste disposal number of waste from residues/unused products**

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals  
Classified as hazardous waste.

**Waste disposal number of used product**

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals  
Classified as hazardous waste.

**Waste disposal number of contaminated packaging**

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by dangerous substances  
Classified as hazardous waste.

**Contaminated packaging**

Water (with cleaning agent). Completely emptied packages can be recycled.

**SECTION 14: Transport information****Land transport (ADR/RID)****Other applicable information (land transport)**

Not a hazardous material with respect to these transportation regulations.

**Inland waterways transport (ADN)****Other applicable information (inland waterways transport)**

Not a hazardous material with respect to these transportation regulations.

**Marine transport (IMDG)****Other applicable information (marine transport)**

Not a hazardous material with respect to these transportation regulations.

**Air transport (ICAO)****Other applicable information (air transport)**

Not a hazardous material with respect to these transportation regulations.

**14.5. Environmental hazards**

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### Extracting solution, 1 l

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ENVIRONMENTALLY HAZARDOUS: no

### SECTION 15: Regulatory information

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

##### **EU regulatory information**

##### **Additional information**

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

##### **National regulatory information**

Water contaminating class (D): -- not water contaminating

#### **15.2. Chemical safety assessment**

For this substance a chemical safety assessment has not been carried out.

### SECTION 16: Other information

*(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)*

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### Sulfuric acid 95-98%, 1 l

Print date: 15.04.2015

Product code: 9992067j

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

### 1.1. Product identifier

Sulfuric acid 95-98%, 1 l

CAS No: 7664-93-9  
Index No: 016-020-00-8  
EC No: 231-639-5

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

#### Use of the substance/mixture

Laboratory chemicals

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

#### Seller

Company name: CONATEX-DIDACTIC Lehrmittel GmbH  
Street: Im Forstgarten 1  
Place: D-66459 Kirkel  
Internet: www.conatex.com

#### Supplier

Company name: Carbolution Chemicals GmbH  
Street: Im Stadtwald, Gebäude A1.2  
Place: D-66123 Saarbrücken  
Contact person: Dr. Michael Bauer Telephone: +49 (0)681 302-71232  
e-mail: michael.bauer@carbolution-chemicals.de  
Internet: www.carbolution-chemicals.de

### 1.4. Emergency telephone number:

+49 (0)681 302-71232

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

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

Indications of danger: C - Corrosive  
R phrases:  
Causes severe burns.

#### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Hazard categories:  
Skin corrosion/irritation: Skin Corr. 1A  
Hazard Statements:  
Causes severe skin burns and eye damage.

### 2.2. Label elements

Signal word: Danger  
Pictograms: GHS05



#### Hazard statements

H314 Causes severe skin burns and eye damage.

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### Sulfuric acid 95-98%, 1 l

Print date: 15.04.2015

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#### Precautionary statements

- 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.  
 P310 Immediately call a POISON CENTER/doctor.

### SECTION 3: Composition/information on ingredients

#### 3.1. Substances

##### Hazardous components

EC No	Chemical name	Quantity
CAS No	Classification according to Directive 67/548/EEC	
Index No	Classification according to Regulation (EC) No. 1272/2008 [CLP]	
231-639-5	Sulphuric acid ... %	100 %
7664-93-9	C - Corrosive R35	
016-020-00-8	Skin Corr. 1A; H314	

Full text of R-, H- and EUH-phrases: see section 16.

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

##### General information

First aider: Pay attention to self-protection! Move victim out of danger zone.

##### After inhalation

Provide fresh air. Medical treatment necessary.

##### After contact with skin

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention.

##### After contact with eyes

In case of contact with eyes, rinse immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Subsequently consult an ophthalmologist.

##### After ingestion

Rinse mouth immediately and drink plenty of water. Do NOT induce vomiting. Potential hazards: Stomach perforation. Call a physician immediately. Do not allow a neutralisation agent to be drunk.

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

No data available

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

##### Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings.

#### 5.2. Special hazards arising from the substance or mixture

The product itself does not burn.

#### 5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing. Full protective suit.

#### Additional information

Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

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according to Regulation (EC) No 1907/2006

### Sulfuric acid 95-98%, 1 l

Print date: 15.04.2015

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#### SECTION 6: Accidental release measures

##### 6.1. Personal precautions, protective equipment and emergency procedures

Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Wear personal protection equipment.

##### 6.2. Environmental precautions

Do not allow to enter into surface water or drains.

##### 6.3. Methods and material for containment and cleaning up

The product needs to apply neutralizing agents before draining to wastewater treatment plants. Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

#### SECTION 7: Handling and storage

##### 7.1. Precautions for safe handling

###### Advice on safe handling

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

###### Advice on protection against fire and explosion

Only use the material in places where open light, fire and other flammable sources can be kept away.

##### 7.2. Conditions for safe storage, including any incompatibilities

###### Requirements for storage rooms and vessels

Keep container tightly closed. Keep locked up. Store in a place accessible by authorized persons only. Provide adequate ventilation as well as local exhaustion at critical locations.

#### SECTION 8: Exposure controls/personal protection

##### 8.1. Control parameters

###### Exposure limits (EH40)

CAS No	Substance	ppm	mg/m <sup>3</sup>	fibres/ml	Category	Origin
7664-93-9	Sulphuric acid (mist)	-	0.05		TWA (8 h)	WEL
		-	-		STEL (15 min)	WEL

##### 8.2. Exposure controls

###### Appropriate engineering controls

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

###### Protective and hygiene measures

Remove contaminated, saturated clothing immediately. Protect skin by using skin protective cream. After work, wash hands and face. When using do not eat or drink.

###### Eye/face protection

Eye protection: Tightly sealed safety glasses. German Industry Norms (DIN) / European Norms (EN): DIN EN 166

###### Hand protection

Hand protection: Single-use gloves. Before using check leak tightness / impermeability. Use gloves only once. German Industry Norms (DIN) / European Norms (EN): DIN EN 374

###### Skin protection

Body protection: Lab apron. Only wear fitting, comfortable and clean protective clothing.



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**Respiratory protection**

With correct and proper use, and under normal conditions, breathing protection is not required. If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn. Suitable respiratory protective equipment: particulates filter device (DIN EN 143).

**SECTION 9: Physical and chemical properties**

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

Physical state: liquid  
 Colour: colourless  
 Odour: No data available

pH-Value:

**Test method**  
 1,2 5 g/l

**Changes in the physical state**

Melting point: 3 °C  
 Initial boiling point and boiling range: 290 °C  
 Sublimation point: No data available  
 Softening point: No data available  
 Flash point: No data available

**Flammability**

Solid: No data available  
 Gas: No data available  
 Lower explosion limits: No data available  
 Upper explosion limits: No data available  
 Ignition temperature: No data available

**Auto-ignition temperature**

Solid: No data available  
 Gas: No data available  
 Vapour pressure: 1,33 hPa  
 (at 145,8 °C)  
 Vapour pressure: No data available  
 Density (at 25 °C): 1,84 g/cm<sup>3</sup>  
 Water solubility: No data available  
 Partition coefficient: No data available  
 Viscosity / dynamic: No data available  
 Viscosity / kinematic: No data available  
 Flow time: No data available  
 Vapour density: 1,84  
 Evaporation rate: No data available  
 Solvent separation test: No data available  
 Solvent content: No data available

**9.2. Other information**

Solid content: No data available

**SECTION 10: Stability and reactivity**

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**10.1. Reactivity**

No data available

**10.3. Possibility of hazardous reactions**

No data available

**10.4. Conditions to avoid**

No data available

**10.5. Incompatible materials**

Substance, organic. metals in powder form.

**SECTION 11: Toxicological information****11.1. Information on toxicological effects****Toxicokinetics, metabolism and distribution**

Toxicological data are not available.

**Acute toxicity**

Toxicological data are not available.

**Irritation and corrosivity**

after ingestion: Irritant and corrosive effects. Potential hazards: Stomach perforation.

**Sensitising effects**

No data available

**Severe effects after repeated or prolonged exposure**

No data available

**Carcinogenic/mutagenic/toxic effects for reproduction**

Due to missing data no statement can be made whether the substance fulfills the criteria of CMR categories 1 or 2. Practical experiences do not give any evidence for CMR activity of categories 1 or 2.

**Specific effects in experiment on an animal**

No data available

**Additional information on tests**

The classification was carried out according to the calculation method of the Preparations Directive (1999/45/EC).

**Practical experience****Observations relevant to classification**

No data available

**SECTION 12: Ecological information****12.1. Toxicity**

No data available

**12.2. Persistence and degradability**

No data available

**12.3. Bioaccumulative potential**

No data available

**12.4. Mobility in soil**

No data available

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

No data available

**12.6. Other adverse effects**

No data available

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#### Further information

The classification was carried out according to the calculation method of the Preparations Directive (1999/45/EC).

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

##### Advice on disposal

Dispose of waste according to applicable legislation.

##### Waste disposal number of waste from residues/unused products

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals  
Classified as hazardous waste.

##### Waste disposal number of used product

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals  
Classified as hazardous waste.

##### Waste disposal number of contaminated packaging

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by dangerous substances  
Classified as hazardous waste.

##### Contaminated packaging

Water (with cleaning agent). Completely emptied packages can be recycled.

### SECTION 14: Transport information

#### Land transport (ADR/RID)

<b>14.1. UN number:</b>	UN1830
<b>14.2. UN proper shipping name:</b>	SULPHURIC ACID with more than 51% acid
<b>14.3. Transport hazard class(es):</b>	8
<b>14.4. Packing group:</b>	II
Hazard label:	8
Classification code:	C1
Limited quantity:	1 L
Transport category:	2
Hazard No:	80
Tunnel restriction code:	E

#### Other applicable information (land transport)

E2

#### Inland waterways transport (ADN)

<b>14.1. UN number:</b>	UN1830
<b>14.2. UN proper shipping name:</b>	SULPHURIC ACID with more than 51% acid
<b>14.3. Transport hazard class(es):</b>	8
<b>14.4. Packing group:</b>	II
Hazard label:	8
Classification code:	C1
Limited quantity:	1 L

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<b>Sulfuric acid 95-98%, 1 l</b>		
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**Other applicable information (inland waterways transport)**

E2

**Marine transport (IMDG)**

<b>14.1. UN number:</b>	UN1830
<b>14.2. UN proper shipping name:</b>	SCHWEFELSÄURE, mit mehr als 51 % Säure
<b>14.3. Transport hazard class(es):</b>	8
<b>14.4. Packing group:</b>	II
Hazard label:	8
Special Provisions:	-
Limited quantity:	1 L
EmS:	F-A, S-B

**Other applicable information (marine transport)**

E2

**Air transport (ICAO)**

<b>14.1. UN number:</b>	UN1830
<b>14.2. UN proper shipping name:</b>	SCHWEFELSÄURE, mit mehr als 51 % Säure
<b>14.3. Transport hazard class(es):</b>	8
<b>14.4. Packing group:</b>	II
Hazard label:	8
Limited quantity Passenger:	0.5 L
IATA-packing instructions - Passenger:	851
IATA-max. quantity - Passenger:	1 L
IATA-packing instructions - Cargo:	855
IATA-max. quantity - Cargo:	30 L

**Other applicable information (air transport)**

E2

: Y840

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: no

**SECTION 15: Regulatory information**

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

**EU regulatory information**

**Additional information**

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

**National regulatory information**

Water contaminating class (D): 1 - slightly water contaminating

**SECTION 16: Other information**

**Relevant R-phrases (Number and full text)**

35 Causes severe burns.

**Relevant H- and EUH-phrases (Number and full text)**

H314 Causes severe skin burns and eye damage.

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**Barium sulfate, 500 g**

Print date: 15.04.2015

Product code: 9992067k

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Barium sulfate, 500 g

CAS No: 7727-43-7

EC No: 231-784-4

**1.2. Relevant identified uses of the substance or mixture and uses advised against****Use of the substance/mixture**

Laboratory chemicals

**1.3. Details of the supplier of the safety data sheet****Seller**

Company name: CONATEX-DIDACTIC Lehrmittel GmbH

Street: Im Forstgarten 1

Place: D-66459 Kirkel

Internet: www.conatex.com

**Supplier**

Company name: Carbolution Chemicals GmbH

Street: Im Stadtwald, Gebäude A1.2

Place: D-66123 Saarbrücken

Contact person: Dr. Michael Bauer Telephone: +49 (0)681 302-71232

e-mail: michael.bauer@carbolution-chemicals.de

Internet: www.carbolution-chemicals.de

**1.4. Emergency telephone number:** +49 (0)681 302-71232**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture**

The preparation is not dangerous in the sense of Directive 1999/45/EC.

**Classification according to Regulation (EC) No. 1272/2008 [CLP]**

This substance is not classified as hazardous according to Regulation (EC) No. 1272/2008.

**2.2. Label elements****Additional advice on labelling**

According to EC directives or the corresponding national regulations the product does not have to be labelled.

**SECTION 3: Composition/information on ingredients****3.1. Substances**

Sum formula: BaO4S

Molecular weight: 233,39

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### Barium sulfate, 500 g

Print date: 15.04.2015

Product code: 9992067k

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#### Hazardous components

EC No	Chemical name	Quantity
CAS No	Classification according to Directive 67/548/EEC	
Index No	Classification according to Regulation (EC) No. 1272/2008 [CLP]	
231-784-4	Barium sulfate	100 %
7727-43-7		

Full text of R-, H- and EUH-phrases: see section 16.

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

##### After inhalation

Provide fresh air.

##### After contact with skin

Wash with plenty of water. Change contaminated clothing.

##### After contact with eyes

Rinse immediately carefully and thoroughly with eye-bath or water.

##### After ingestion

Rinse mouth immediately and drink plenty of water.

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

No data available

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

##### Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings.

#### 5.2. Special hazards arising from the substance or mixture

The product itself does not burn.

#### 5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.

#### Additional information

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

Avoid generation of dust. Do not breathe dust.

#### 6.2. Environmental precautions

Do not allow to enter into surface water or drains.

#### 6.3. Methods and material for containment and cleaning up

Take up mechanically. Treat the recovered material as prescribed in the section on waste disposal.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

##### Advice on safe handling

If handled uncovered, arrangements with local exhaust ventilation have to be used.

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### Barium sulfate, 500 g

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#### Advice on protection against fire and explosion

Only use the material in places where open light, fire and other flammable sources can be kept away.

#### 7.2. Conditions for safe storage, including any incompatibilities

##### Requirements for storage rooms and vessels

Keep container tightly closed.

#### 7.3. Specific end use(s)

No data available

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

##### Exposure limits (EH40)

CAS No	Substance	ppm	mg/m <sup>3</sup>	fibres/ml	Category	Origin
7727-43-7	Barium sulphate, inhalable dust	-	10		TWA (8 h)	WEL
		-	-		STEL (15 min)	WEL

#### 8.2. Exposure controls

##### Protective and hygiene measures

Change contaminated clothing. Wash hands before breaks and after work. When using do not eat or drink.

##### Eye/face protection

Eye protection: Tightly sealed safety glasses. German Industry Norms (DIN) / European Norms (EN): DIN EN 166

##### Hand protection

Hand protection: Single-use gloves. Before using check leak tightness / impermeability. Use gloves only once. German Industry Norms (DIN) / European Norms (EN): DIN EN 374

##### Skin protection

Body protection: Lab apron. Only wear fitting, comfortable and clean protective clothing.

##### Respiratory protection

With correct and proper use, and under normal conditions, breathing protection is not required. If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn. Suitable respiratory protective equipment: particulates filter device (DIN EN 143).

### SECTION 9: Physical and chemical properties

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

Physical state:	solid
Colour:	colourless
Odour:	No data available

#### Test method

pH-Value:	7
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##### Changes in the physical state

Melting point:	1580 °C
Initial boiling point and boiling range:	1600 °C
Sublimation point:	No data available
Softening point:	No data available
Flash point:	No data available

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**Barium sulfate, 500 g**

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Product code: 9992067k

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**Flammability**

Solid: No data available

Gas: No data available

Lower explosion limits: No data available

Upper explosion limits: No data available

Ignition temperature: No data available

**Auto-ignition temperature**

Solid: No data available

Gas: No data available

Vapour pressure: No data available

Vapour pressure: No data available

Density: 4,5 g/cm<sup>3</sup>

Water solubility: No data available

Partition coefficient: No data available

Viscosity / dynamic: No data available

Viscosity / kinematic: No data available

Flow time: No data available

Vapour density: No data available

Evaporation rate: No data available

Solvent separation test: No data available

Solvent content: No data available

**9.2. Other information**

Solid content: No data available

**SECTION 10: Stability and reactivity**

**10.1. Reactivity**

No data available

**10.3. Possibility of hazardous reactions**

No data available

**10.4. Conditions to avoid**

No data available

**10.5. Incompatible materials**

Oxidizing agents, strong.

**10.6. Hazardous decomposition products**

No data available

**SECTION 11: Toxicological information**

**11.1. Information on toxicological effects**

**Toxicokinetics, metabolism and distribution**

Toxicological data are not available.

**Irritation and corrosivity**

No data available

**Sensitising effects**

No data available



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**Severe effects after repeated or prolonged exposure**

No data available

**Carcinogenic/mutagenic/toxic effects for reproduction**

Due to missing data no statement can be made whether the substance fulfills the criteria of CMR categories 1 or 2. Practical experiences do not give any evidence for CMR activity of categories 1 or 2.

**Specific effects in experiment on an animal**

No data available

**Additional information on tests**

The classification was carried out according to the calculation method of the Preparations Directive (1999/45/EC).

**Practical experience****Observations relevant to classification**

No data available

**Other observations**

No data available

**SECTION 12: Ecological information****12.1. Toxicity**

No data available

**12.2. Persistence and degradability**

No data available

**12.3. Bioaccumulative potential**

No data available

**12.4. Mobility in soil**

No data available

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

No data available

**12.6. Other adverse effects**

No data available

**Further information**

Do not allow to enter into surface water or drains. The classification was carried out according to the calculation method of the Preparations Directive (1999/45/EC).

**SECTION 13: Disposal considerations****13.1. Waste treatment methods****Advice on disposal**

Do not allow to enter into surface water or drains. Dispose of waste according to applicable legislation.

**Waste disposal number of waste from residues/unused products**

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals  
Classified as hazardous waste.

**Waste disposal number of used product**

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals  
Classified as hazardous waste.

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**Waste disposal number of contaminated packaging**

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by dangerous substances  
Classified as hazardous waste.

**Contaminated packaging**

Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself.

**SECTION 14: Transport information****Land transport (ADR/RID)****Other applicable information (land transport)**

Not a hazardous material with respect to these transportation regulations.

**Inland waterways transport (ADN)****Other applicable information (inland waterways transport)**

Not a hazardous material with respect to these transportation regulations.

**Marine transport (IMDG)****Other applicable information (marine transport)**

Not a hazardous material with respect to these transportation regulations.

**Air transport (ICAO)****Other applicable information (air transport)**

Not a hazardous material with respect to these transportation regulations.

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: no

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****EU regulatory information****Additional information**

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

**National regulatory information**

Water contaminating class (D): 3 - highly water contaminating

**15.2. Chemical safety assessment**

For this substance a chemical safety assessment has not been carried out.

**SECTION 16: Other information**

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**Universal indicator, liquid, 100 ml**

Print date: 15.04.2015

Product code: 99920671

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Universal indicator, liquid, 100 ml

**1.2. Relevant identified uses of the substance or mixture and uses advised against****Use of the substance/mixture**

Laboratory chemicals

**1.3. Details of the supplier of the safety data sheet****Seller**

Company name: CONATEX-DIDACTIC Lehrmittel GmbH  
Street: Im Forstgarten 1  
Place: D-66459 Kirkel  
Internet: www.conatex.com

**Supplier**

Company name: Carbolution Chemicals GmbH  
Street: Im Stadtwald, Gebäude A1.2  
Place: D-66123 Saarbrücken  
Contact person: Dr. Michael Bauer Telephone: +49 (0)681 302-71232  
e-mail: michael.bauer@carbolution-chemicals.de  
Internet: www.carbolution-chemicals.de

**1.4. Emergency telephone number:** +49 (0)681 302-71232**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****Classification according to Directive 67/548/EEC or 1999/45/EC**

Indications of danger: F - Highly flammable  
R phrases:  
Highly flammable.

**Classification according to Regulation (EC) No. 1272/2008 [CLP]**

Hazard categories:  
Flammable liquid: Flam. Liq. 2  
Hazard Statements:  
Highly flammable liquid and vapour.

**2.2. Label elements**

Signal word: Danger  
Pictograms: GHS02

**Hazard statements**

H225 Highly flammable liquid and vapour.

**Precautionary statements**

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**Universal indicator, liquid, 100 ml**

Print date: 15.04.2015

Product code: 99920671

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**SECTION 3: Composition/information on ingredients****3.2. Mixtures****SECTION 4: First aid measures****4.1. Description of first aid measures****General information**

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

**After inhalation**

Provide fresh air.

**After contact with skin**

Wash with plenty of water. Change contaminated clothing.

**After contact with eyes**

Rinse immediately carefully and thoroughly with eye-bath or water.

**After ingestion**

Rinse mouth immediately and drink plenty of water.

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

No data available

**SECTION 5: Firefighting measures****5.1. Extinguishing media****Suitable extinguishing media**

Carbon dioxide (CO<sub>2</sub>). Foam. Extinguishing powder.

**5.2. Special hazards arising from the substance or mixture**

Combustible. Vapours may form explosive mixtures with air.

**5.3. Advice for firefighters**

In case of fire: Wear self-contained breathing apparatus.

**Additional information**

Use water spray jet to protect personnel and to cool endangered containers. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**

Remove all sources of ignition. Provide adequate ventilation.

**6.2. Environmental precautions**

Do not allow uncontrolled discharge of product into the environment. Explosion hazard.

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

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).  
Treat the recovered material as prescribed in the section on waste disposal.

**SECTION 7: Handling and storage****7.1. Precautions for safe handling****Advice on safe handling**

If handled uncovered, arrangements with local exhaust ventilation have to be used.

**Advice on protection against fire and explosion**

Keep away from sources of ignition. - No smoking. Take precautionary measures against static

**Safety Data Sheet**

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**Universal indicator, liquid, 100 ml**

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discharges. Vapours may form explosive mixtures with air.

**7.2. Conditions for safe storage, including any incompatibilities**

**Requirements for storage rooms and vessels**

Keep container tightly closed. Keep in a cool, well-ventilated place. Keep away from sources of ignition.  
- No smoking.

**Advice on storage compatibility**

Do not store together with: Material, rich in oxygen, oxidizing.

**SECTION 8: Exposure controls/personal protection**

**8.1. Control parameters**

**Exposure limits (EH40)**

CAS No	Substance	ppm	mg/m <sup>3</sup>	fibres/ml	Category	Origin
64-17-5	Ethanol	1000	1920		TWA (8 h)	WEL
		-	-		STEL (15 min)	WEL

**8.2. Exposure controls**

**Protective and hygiene measures**

Change contaminated clothing. Wash hands before breaks and after work. When using do not eat or drink.

**Eye/face protection**

Eye protection: Tightly sealed safety glasses. German Industry Norms (DIN) / European Norms (EN): DIN EN 166

**Hand protection**

Hand protection: Single-use gloves. Before using check leak tightness / impermeability. Use gloves only once. German Industry Norms (DIN) / European Norms (EN): DIN EN 374

**Skin protection**

Body protection: Lab apron. Only wear fitting, comfortable and clean protective clothing.

**Respiratory protection**

With correct and proper use, and under normal conditions, breathing protection is not required. If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn. Suitable respiratory protective equipment: particulates filter device (DIN EN 143).

**SECTION 9: Physical and chemical properties**

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

Physical state: liquid  
Colour:  
Odour: No data available

**Test method**

pH-Value: No data available

**Changes in the physical state**

Initial boiling point and boiling range: No data available

Sublimation point: No data available

Softening point: No data available

Flash point: 12 °C

**Flammability**

Solid: No data available

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### Universal indicator, liquid, 100 ml

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Gas:	No data available
Lower explosion limits:	No data available
Upper explosion limits:	No data available
Ignition temperature:	No data available
<b>Auto-ignition temperature</b>	
Solid:	No data available
Gas:	No data available
Vapour pressure:	No data available
Vapour pressure:	No data available
Density:	No data available
Water solubility:	No data available
Partition coefficient:	No data available
Viscosity / dynamic:	No data available
Viscosity / kinematic:	No data available
Flow time:	No data available
Vapour density:	No data available
Evaporation rate:	No data available
Solvent separation test:	No data available
Solvent content:	No data available
<b><u>9.2. Other information</u></b>	
Solid content:	No data available

## SECTION 10: Stability and reactivity

### **10.1. Reactivity**

No data available

### **10.3. Possibility of hazardous reactions**

No data available

### **10.4. Conditions to avoid**

Keep away from heat. Ignition hazard.

### **10.5. Incompatible materials**

Oxidizing agents, strong.

### **10.6. Hazardous decomposition products**

No data available

## SECTION 11: Toxicological information

### **11.1. Information on toxicological effects**

#### **Toxicokinetics, metabolism and distribution**

Toxicological data are not available.

#### **Acute toxicity**

Toxicological data are not available.

#### **Irritation and corrosivity**

No data available

#### **Sensitising effects**

No data available

**Safety Data Sheet**

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**Severe effects after repeated or prolonged exposure**

No data available

**Carcinogenic/mutagenic/toxic effects for reproduction**

Due to missing data no statement can be made whether the substance fulfills the criteria of CMR categories 1 or 2. Practical experiences do not give any evidence for CMR activity of categories 1 or 2.

**Specific effects in experiment on an animal**

No data available

**Additional information on tests**

The classification was carried out according to the calculation method of the Preparations Directive (1999/45/EC).

**Practical experience****Observations relevant to classification**

No data available

**SECTION 12: Ecological information****12.1. Toxicity**

No data available

**12.2. Persistence and degradability**

No data available

**12.3. Bioaccumulative potential**

No data available

**12.4. Mobility in soil**

No data available

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

No data available

**12.6. Other adverse effects**

No data available

**Further information**

The classification was carried out according to the calculation method of the Preparations Directive (1999/45/EC).

**SECTION 13: Disposal considerations****13.1. Waste treatment methods****Advice on disposal**

Dispose of waste according to applicable legislation.

**Waste disposal number of waste from residues/unused products**

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals  
Classified as hazardous waste.

**Waste disposal number of used product**

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals  
Classified as hazardous waste.

**Waste disposal number of contaminated packaging**

**Safety Data Sheet**

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**Universal indicator, liquid, 100 ml**

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150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by dangerous substances  
Classified as hazardous waste.

**Contaminated packaging**

Water (with cleaning agent). Completely emptied packages can be recycled.

**SECTION 14: Transport information**

**Land transport (ADR/RID)**

**14.1. UN number:** UN1170  
**14.2. UN proper shipping name:** ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)  
**14.3. Transport hazard class(es):** 3  
**14.4. Packing group:** II  
Hazard label: 3  
Classification code: F1  
Special Provisions: 144 601  
Limited quantity: 1 L  
Transport category: 2  
Hazard No: 33  
Tunnel restriction code: D/E

**Other applicable information (land transport)**

E2

**Inland waterways transport (ADN)**

**14.1. UN number:** UN1170  
**14.2. UN proper shipping name:** ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)  
**14.3. Transport hazard class(es):** 3  
**14.4. Packing group:** II  
Hazard label: 3  
Classification code: F1  
Special Provisions: 144 601  
Limited quantity: 1 L

**Other applicable information (inland waterways transport)**

E2

**Marine transport (IMDG)**

**14.1. UN number:** UN1170  
**14.2. UN proper shipping name:** ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)  
**14.3. Transport hazard class(es):** 3  
**14.4. Packing group:** II  
Hazard label: 3  
Special Provisions: 144  
Limited quantity: 1 L  
EmS: F-E, S-D

**Other applicable information (marine transport)**

E2

**Air transport (ICAO)**

**14.1. UN number:** UN1170



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<b>14.2. UN proper shipping name:</b>	ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)	
<b>14.3. Transport hazard class(es):</b>	3	
<b>14.4. Packing group:</b>	II	
Hazard label:	3	
Special Provisions:	A3 A58 A180	
Limited quantity Passenger:	1 L	
IATA-packing instructions - Passenger:	353	
IATA-max. quantity - Passenger:	5 L	
IATA-packing instructions - Cargo:	364	
IATA-max. quantity - Cargo:	60 L	
<b>Other applicable information (air transport)</b>		
E2		
: Y341		

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: no

**SECTION 15: Regulatory information**

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

**EU regulatory information**

2004/42/EC (VOC): 99,88 %

**Additional information**

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

**National regulatory information**

Water contaminating class (D): 1 - slightly water contaminating

**SECTION 16: Other information**

**Relevant H- and EUH-phrases (Number and full text)**

H225 Highly flammable liquid and vapour.

*(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)*

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**Potassium chloride, 500 g**

Print date: 15.04.2015

Product code: 9992067m

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Potassium chloride, 500 g

CAS No: 7447-40-7

EC No: 231-211-8

**1.2. Relevant identified uses of the substance or mixture and uses advised against****Use of the substance/mixture**

Laboratory chemicals

**1.3. Details of the supplier of the safety data sheet****Seller**

Company name: CONATEX-DIDACTIC Lehrmittel GmbH

Street: Im Forstgarten 1

Place: D-66459 Kirkel

Internet: www.conatex.com

**Supplier**

Company name: Carbolution Chemicals GmbH

Street: Im Stadtwald, Gebäude A1.2

Place: D-66123 Saarbrücken

Contact person: Dr. Michael Bauer Telephone: +49 (0)681 302-71232

e-mail: michael.bauer@carbolution-chemicals.de

Internet: www.carbolution-chemicals.de

**1.4. Emergency telephone number:** +49 (0)681 302-71232**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****Classification according to Regulation (EC) No. 1272/2008 [CLP]**

This substance is not classified as hazardous according to Regulation (EC) No. 1272/2008.

**2.2. Label elements****Additional advice on labelling**

According to EC directives or the corresponding national regulations the product does not have to be labelled.

**SECTION 3: Composition/information on ingredients****3.1. Substances**

Sum formula: ClK

Molecular weight: 74,55

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### Potassium chloride, 500 g

Print date: 15.04.2015

Product code: 9992067m

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#### Hazardous components

EC No	Chemical name	Quantity
CAS No	Classification according to Directive 67/548/EEC	
Index No	Classification according to Regulation (EC) No. 1272/2008 [CLP]	
	@000009991491	100 %

Full text of R-, H- and EUH-phrases: see section 16.

#### SECTION 4: First aid measures

##### 4.1. Description of first aid measures

###### **After inhalation**

Provide fresh air.

###### **After contact with skin**

Wash with plenty of water. Change contaminated clothing.

###### **After contact with eyes**

Rinse immediately carefully and thoroughly with eye-bath or water.

###### **After ingestion**

Rinse mouth immediately and drink plenty of water.

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

No data available

#### SECTION 5: Firefighting measures

##### 5.1. Extinguishing media

###### **Suitable extinguishing media**

Co-ordinate fire-fighting measures to the fire surroundings.

##### 5.2. Special hazards arising from the substance or mixture

The product itself does not burn.

##### 5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.

##### **Additional information**

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

#### SECTION 6: Accidental release measures

##### 6.1. Personal precautions, protective equipment and emergency procedures

Avoid generation of dust. Do not breathe dust.

##### 6.2. Environmental precautions

Do not allow to enter into surface water or drains.

##### 6.3. Methods and material for containment and cleaning up

Take up mechanically. Treat the recovered material as prescribed in the section on waste disposal.

#### SECTION 7: Handling and storage

##### 7.1. Precautions for safe handling

###### **Advice on safe handling**

If handled uncovered, arrangements with local exhaust ventilation have to be used.

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### Potassium chloride, 500 g

Print date: 15.04.2015

Product code: 9992067m

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#### Advice on protection against fire and explosion

Only use the material in places where open light, fire and other flammable sources can be kept away.

#### 7.2. Conditions for safe storage, including any incompatibilities

##### Requirements for storage rooms and vessels

Keep container tightly closed.

#### 7.3. Specific end use(s)

No data available

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

#### 8.2. Exposure controls

##### Protective and hygiene measures

Change contaminated clothing. Wash hands before breaks and after work. When using do not eat or drink.

##### Eye/face protection

Eye protection: Tightly sealed safety glasses. German Industry Norms (DIN) / European Norms (EN): DIN EN 166

##### Hand protection

Hand protection: Single-use gloves. Before using check leak tightness / impermeability. Use gloves only once. German Industry Norms (DIN) / European Norms (EN): DIN EN 374

##### Skin protection

Body protection: Lab apron. Only wear fitting, comfortable and clean protective clothing.

##### Respiratory protection

With correct and proper use, and under normal conditions, breathing protection is not required. If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn. Suitable respiratory protective equipment: particulates filter device (DIN EN 143).

### SECTION 9: Physical and chemical properties

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

Physical state:	solid
Colour:	colourless
Odour:	No data available

#### Test method

pH-Value:	7
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#### Changes in the physical state

Melting point:	770 °C
Initial boiling point and boiling range:	1500 °C
Sublimation point:	No data available
Softening point:	No data available
Flash point:	No data available

#### Flammability

Solid:	No data available
Gas:	No data available
Lower explosion limits:	No data available
Upper explosion limits:	No data available

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**Potassium chloride, 500 g**

Print date: 15.04.2015

Product code: 9992067m

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Ignition temperature:	No data available
<b>Auto-ignition temperature</b>	
Solid:	No data available
Gas:	No data available
Vapour pressure:	No data available
Vapour pressure:	No data available
Density:	No data available
Water solubility:	No data available
Partition coefficient:	No data available
Viscosity / dynamic:	No data available
Viscosity / kinematic:	No data available
Flow time:	No data available
Vapour density:	No data available
Evaporation rate:	No data available
Solvent separation test:	No data available
Solvent content:	No data available

**9.2. Other information**

Solid content:	No data available
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**SECTION 10: Stability and reactivity**

**10.1. Reactivity**

No data available

**10.3. Possibility of hazardous reactions**

No data available

**10.4. Conditions to avoid**

No data available

**10.5. Incompatible materials**

Oxidizing agents, strong.

**SECTION 11: Toxicological information**

**11.1. Information on toxicological effects**

**Toxicocinetics, metabolism and distribution**

Toxicological data are not available.

**Acute toxicity**

Toxicological data are not available.

**Irritation and corrosivity**

No data available

**Sensitising effects**

No data available

**Severe effects after repeated or prolonged exposure**

No data available

**Carcinogenic/mutagenic/toxic effects for reproduction**

Due to missing data no statement can be made whether the substance fulfills the criteria of CMR categories 1 or 2. Practical experiences do not give any evidence for CMR activity of categories 1 or 2.

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**Potassium chloride, 500 g**

Print date: 15.04.2015

Product code: 9992067m

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**Specific effects in experiment on an animal**

No data available

**Additional information on tests**

The classification was carried out according to the calculation method of the Preparations Directive (1999/45/EC).

**Practical experience****Observations relevant to classification**

No data available

**Other observations**

No data available

**SECTION 12: Ecological information****12.1. Toxicity**

No data available

**12.2. Persistence and degradability**

No data available

**12.3. Bioaccumulative potential**

No data available

**12.4. Mobility in soil**

No data available

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

No data available

**12.6. Other adverse effects**

No data available

**Further information**

Do not allow to enter into surface water or drains. The classification was carried out according to the calculation method of the Preparations Directive (1999/45/EC).

**SECTION 13: Disposal considerations****13.1. Waste treatment methods****Advice on disposal**

Do not allow to enter into surface water or drains. Dispose of waste according to applicable legislation.

**Waste disposal number of waste from residues/unused products**

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals  
Classified as hazardous waste.

**Waste disposal number of used product**

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals  
Classified as hazardous waste.

**Waste disposal number of contaminated packaging**

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by dangerous substances  
Classified as hazardous waste.

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### Potassium chloride, 500 g

Print date: 15.04.2015

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#### Contaminated packaging

Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself.

### SECTION 14: Transport information

#### Land transport (ADR/RID)

##### Other applicable information (land transport)

Not a hazardous material with respect to these transportation regulations.

#### Inland waterways transport (ADN)

##### Other applicable information (inland waterways transport)

Not a hazardous material with respect to these transportation regulations.

#### Marine transport (IMDG)

##### Other applicable information (marine transport)

Not a hazardous material with respect to these transportation regulations.

#### Air transport (ICAO)

##### Other applicable information (air transport)

Not a hazardous material with respect to these transportation regulations.

#### 14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

### SECTION 15: Regulatory information

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

##### EU regulatory information

##### Additional information

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

##### National regulatory information

Water contaminating class (D): 3 - highly water contaminating

#### 15.2. Chemical safety assessment

For this substance a chemical safety assessment has not been carried out.

### SECTION 16: Other information

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**Diphenylamine, for analysis, 250 g**

Print date: 15.04.2015

Product code: 9992067n

Page 1 of 8

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Diphenylamine, for analysis, 250 g

CAS No: 122-39-4  
Index No: 612-026-00-5  
EC No: 204-539-4

**1.2. Relevant identified uses of the substance or mixture and uses advised against****Use of the substance/mixture**

Laboratory chemicals

**1.3. Details of the supplier of the safety data sheet****Seller**

Company name: CONATEX-DIDACTIC Lehrmittel GmbH  
Street: Im Forstgarten 1  
Place: D-66459 Kirkel  
Internet: www.conatex.com

**Supplier**

Company name: Carbolution Chemicals GmbH  
Street: Im Stadtwald, Gebäude A1.2  
Place: D-66123 Saarbrücken  
Contact person: Dr. Michael Bauer Telephone: +49 (0)681 302-71232  
e-mail: michael.bauer@carbolution-chemicals.de  
Internet: www.carbolution-chemicals.de

**1.4. Emergency telephone number:** +49 (0)681 302-71232**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****Classification according to Directive 67/548/EEC or 1999/45/EC**

Indications of danger: T - Toxic, N - Dangerous for the environment  
R phrases:  
Toxic by inhalation, in contact with skin and if swallowed.  
Danger of cumulative effects.  
Very toxic to aquatic organisms.  
May cause long-term adverse effects in the aquatic environment.

**Classification according to Regulation (EC) No. 1272/2008 [CLP]**

Hazard categories:  
Acute toxicity: Acute Tox. 3  
Acute toxicity: Acute Tox. 3  
Acute toxicity: Acute Tox. 3  
Specific target organ toxicity - repeated exposure: STOT RE 2  
Hazardous to the aquatic environment: Aquatic Acute 1 (M-Factor = 1)  
Hazardous to the aquatic environment: Aquatic Chronic 1 (M-Factor = 1)  
Hazard Statements:  
Toxic if inhaled.  
Toxic in contact with skin.  
Toxic if swallowed.  
May cause damage to organs through prolonged or repeated exposure.



## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### Diphenylamine, for analysis, 250 g

Print date: 15.04.2015

Product code: 9992067n

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Very toxic to aquatic life.

Very toxic to aquatic life with long lasting effects.

#### 2.2. Label elements

Signal word:

Danger

Pictograms:

GHS06-GHS08-GHS09



#### Hazard statements

H301+H311+H331

Toxic if swallowed, in contact with skin or if inhaled.

H373

May cause damage to organs through prolonged or repeated exposure.

H410

Very toxic to aquatic life with long lasting effects.

#### Precautionary statements

P261

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

P273

Avoid release to the environment.

P280

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

P301+P310

IF SWALLOWED: Immediately call a POISON CENTER/doctor.

P311

Call a POISON CENTER/doctor.

### SECTION 3: Composition/information on ingredients

#### 3.1. Substances

Sum formula:

C<sub>12</sub>H<sub>11</sub>N

Molecular weight:

169,22

#### Hazardous components

EC No	Chemical name	Quantity
CAS No	Classification according to Directive 67/548/EEC	
Index No	Classification according to Regulation (EC) No. 1272/2008 [CLP]	
204-539-4	diphenylamine	100 %
122-39-4	T - Toxic, N - Dangerous for the environment R23/24/25-33-50-53	
612-026-00-5	Acute Tox. 3, Acute Tox. 3, Acute Tox. 3, STOT RE 2, Aquatic Acute 1, Aquatic Chronic 1; H331 H311 H301 H373 ** H400 H410	

Full text of R-, H- and EUH-phrases: see section 16.

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

##### General information

First aider: Pay attention to self-protection! Move victim out of danger zone.

##### After inhalation

Provide fresh air. In case of breathing difficulties administer oxygen. No mouth-to-mouth or mouth-to-nose resuscitation. Use Ambu bag or ventilator. Call a physician immediately.

##### After contact with skin

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a physician immediately.

##### After contact with eyes

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

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**Diphenylamine, for analysis, 250 g**

Print date: 15.04.2015

Product code: 9992067n

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**After ingestion**

Rinse mouth immediately and drink plenty of water. Induce vomiting when the affected person is not unconscious. Call a physician immediately.

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

No data available

**SECTION 5: Firefighting measures****5.1. Extinguishing media****Suitable extinguishing media**

Co-ordinate fire-fighting measures to the fire surroundings.

**5.2. Special hazards arising from the substance or mixture**

The product itself does not burn.

**5.3. Advice for firefighters**

Wear a self-contained breathing apparatus and chemical protective clothing. Full protective suit.

**Additional information**

Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**

Provide adequate ventilation. Avoid generation of dust. Do not breathe dust. Avoid contact with skin, eyes and clothes. Wear personal protection equipment.

**6.2. Environmental precautions**

Do not allow to enter into surface water or drains.

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

Take up mechanically. Treat the recovered material as prescribed in the section on waste disposal.

**SECTION 7: Handling and storage****7.1. Precautions for safe handling****Advice on safe handling**

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe dust.

**Advice on protection against fire and explosion**

Only use the material in places where open light, fire and other flammable sources can be kept away.

**7.2. Conditions for safe storage, including any incompatibilities****Requirements for storage rooms and vessels**

Keep container tightly closed. Keep locked up. Store in a place accessible by authorized persons only. Provide adequate ventilation as well as local exhaustion at critical locations.

**Further information on storage conditions**

Recommended storage temperature: -20 °C

**SECTION 8: Exposure controls/personal protection****8.1. Control parameters**

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**Diphenylamine, for analysis, 250 g**

Print date: 15.04.2015

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**Exposure limits (EH40)**

CAS No	Substance	ppm	mg/m <sup>3</sup>	fibres/ml	Category	Origin
122-39-4	Diphenylamine	-	10		TWA (8 h)	WEL
		-	20		STEL (15 min)	WEL

**8.2. Exposure controls**

**Appropriate engineering controls**

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe dust.

**Protective and hygiene measures**

Remove contaminated, saturated clothing immediately. Protect skin by using skin protective cream. After work, wash hands and face. When using do not eat or drink.

**Eye/face protection**

Eye protection: Tightly sealed safety glasses. German Industry Norms (DIN) / European Norms (EN): DIN EN 166

**Hand protection**

Hand protection: Single-use gloves. Before using check leak tightness / impermeability. Use gloves only once. German Industry Norms (DIN) / European Norms (EN): DIN EN 374

**Skin protection**

Body protection: Lab apron. Only wear fitting, comfortable and clean protective clothing.

**Respiratory protection**

With correct and proper use, and under normal conditions, breathing protection is not required. If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn. Suitable respiratory protective equipment: particulates filter device (DIN EN 143).

**SECTION 9: Physical and chemical properties**

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

Physical state: solid  
 Colour: colourless  
 Odour: No data available

pH-Value: No data available

**Test method**

**Changes in the physical state**

Melting point: 50 °C  
 Initial boiling point and boiling range: 302 °C  
 Sublimation point: No data available  
 Softening point: No data available  
 Flash point: 153 °C

**Flammability**

Solid: No data available  
 Gas: No data available

Lower explosion limits: No data available

Upper explosion limits: No data available

Ignition temperature: No data available

**Auto-ignition temperature**

Solid: No data available

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**Diphenylamine, for analysis, 250 g**

Print date: 15.04.2015

Product code: 9992067n

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Gas:	No data available
Vapour pressure: (at 108 °C)	1 hPa
Vapour pressure:	No data available
Density:	1,16 g/cm <sup>3</sup>
Water solubility:	No data available
Partition coefficient:	3,5
Viscosity / dynamic:	No data available
Viscosity / kinematic:	No data available
Flow time:	No data available
Vapour density:	No data available
Evaporation rate:	No data available
Solvent separation test:	No data available
Solvent content:	No data available

**9.2. Other information**

Solid content:	No data available
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**SECTION 10: Stability and reactivity**

**10.1. Reactivity**

No data available

**10.3. Possibility of hazardous reactions**

No data available

**10.4. Conditions to avoid**

No data available

**10.5. Incompatible materials**

Oxidizing agents, strong.

**10.6. Hazardous decomposition products**

No data available

**SECTION 11: Toxicological information**

**11.1. Information on toxicological effects**

**Toxicokinetics, metabolism and distribution**

Toxicological data are not available.

**Acute toxicity**

Toxic. Acute toxicity, oral. Acute toxicity, inhalant. Acute toxicity, dermal.

CAS No	Chemical name				
	Exposure routes	Method	Dose	Species	Source
122-39-4	diphenylamine				
	oral	ATE	100 mg/kg		
	dermal	ATE	300 mg/kg		
	inhalative vapour	ATE	3 mg/l		
	inhalative aerosol	ATE	0,5 mg/l		

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**Irritation and corrosivity**

No data available

**Sensitising effects**

No data available

**Severe effects after repeated or prolonged exposure**

Danger of serious damage to health by prolonged exposure.

**Carcinogenic/mutagenic/toxic effects for reproduction**

Due to missing data no statement can be made whether the substance fulfills the criteria of CMR categories 1 or 2. Practical experiences do not give any evidence for CMR activity of categories 1 or 2.

**Specific effects in experiment on an animal**

No data available

**Additional information on tests**

The classification was carried out according to the calculation method of the Preparations Directive (1999/45/EC).

**Practical experience****Observations relevant to classification**

No data available

**SECTION 12: Ecological information****12.1. Toxicity**

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

**12.2. Persistence and degradability**

No data available

**12.3. Bioaccumulative potential**

No data available

**12.4. Mobility in soil**

No data available

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

No data available

**12.6. Other adverse effects**

No data available

**Further information**

Do not allow to enter into surface water or drains. The classification was carried out according to the calculation method of the Preparations Directive (1999/45/EC).

**SECTION 13: Disposal considerations****13.1. Waste treatment methods****Advice on disposal**

Do not allow to enter into surface water or drains. Dispose of waste according to applicable legislation.

**Waste disposal number of waste from residues/unused products**

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals  
Classified as hazardous waste.

**Waste disposal number of used product**

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160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals  
Classified as hazardous waste.

**Waste disposal number of contaminated packaging**

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by dangerous substances  
Classified as hazardous waste.

**Contaminated packaging**

Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself.

**SECTION 14: Transport information**

**Land transport (ADR/RID)**

**14.1. UN number:** UN3077  
**14.2. UN proper shipping name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
**14.3. Transport hazard class(es):** 9  
**14.4. Packing group:** III  
Hazard label: 9  
Classification code: M7  
Special Provisions: 274 335 601  
Limited quantity: 5 kg  
Transport category: 3  
Hazard No: 90  
Tunnel restriction code: E

**Other applicable information (land transport)**

E1

**Inland waterways transport (ADN)**

**14.1. UN number:** UN3077  
**14.2. UN proper shipping name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
**14.3. Transport hazard class(es):** 9  
**14.4. Packing group:** III  
Hazard label: 9  
Classification code: M7  
Special Provisions: 274 335 601  
Limited quantity: 5 kg

**Other applicable information (inland waterways transport)**

E1

**Marine transport (IMDG)**

**14.1. UN number:** UN3077  
**14.2. UN proper shipping name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
**14.3. Transport hazard class(es):** 9  
**14.4. Packing group:** III  
Hazard label: 9  
Special Provisions: 274, 335  
Limited quantity: 5 kg

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EmS: F-A, S-F

**Other applicable information (marine transport)**

E1

**Air transport (ICAO)**

**14.1. UN number:** UN3077  
**14.2. UN proper shipping name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
**14.3. Transport hazard class(es):** 9  
**14.4. Packing group:** III  
Hazard label: 9  
Special Provisions: A97 A158 A179  
Limited quantity Passenger: 30 kg G  
IATA-packing instructions - Passenger: 956  
IATA-max. quantity - Passenger: 400 kg  
IATA-packing instructions - Cargo: 956  
IATA-max. quantity - Cargo: 400 kg

**Other applicable information (air transport)**

E1

: Y956

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: yes

**SECTION 15: Regulatory information**

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

**EU regulatory information**

**Additional information**

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

**National regulatory information**

Water contaminating class (D): 3 - highly water contaminating

**SECTION 16: Other information**

**Relevant R-phrases (Number and full text)**

23/24/25 Toxic by inhalation, in contact with skin and if swallowed.  
33 Danger of cumulative effects.  
50 Very toxic to aquatic organisms.  
53 May cause long-term adverse effects in the aquatic environment.

**Relevant H- and EUH-phrases (Number and full text)**

H301 Toxic if swallowed.  
H301+H311+H331 Toxic if swallowed, in contact with skin or if inhaled.  
H311 Toxic in contact with skin.  
H331 Toxic if inhaled.  
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.