

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### **o-Phosphoric acid, 85%, 100 ml**

Print date: 15.04.2015

Product code: 9992065a

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

### **1.1. Product identifier**

o-Phosphoric acid, 85%, 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: 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**

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

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P310 present and easy to do. Continue rinsing.  
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		
231-633-2	Phosphoric acid ... %; orthophosphoric acid	85 - < 90 %
7664-38-2	C - Corrosive R34	
015-011-00-6	Skin Corr. 1B; 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 separately. Do not allow entering drains or surface water.

### SECTION 6: Accidental release measures

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#### **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
7664-38-2	Orthophosphoric acid	-	1		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).

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**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  
 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

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**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**

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
7664-38-2	Phosphoric acid ... %; orthophosphoric acid					
	Acute fish toxicity	LC50	138 mg/l	96 h	Gambusia affinis	

**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

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#### **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)**

<b><u>14.1. UN number:</u></b>	UN1805
<b><u>14.2. UN proper shipping name:</u></b>	PHOSPHORIC ACID SOLUTION
<b><u>14.3. Transport hazard class(es):</u></b>	8
<b><u>14.4. Packing group:</u></b>	III
Hazard label:	8
Classification code:	C1
Limited quantity:	5 L
Transport category:	3
Hazard No:	80
Tunnel restriction code:	E

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

E1

#### **Inland waterways transport (ADN)**

<b><u>14.1. UN number:</u></b>	UN1805
<b><u>14.2. UN proper shipping name:</u></b>	PHOSPHORIC ACID SOLUTION
<b><u>14.3. Transport hazard class(es):</u></b>	8
<b><u>14.4. Packing group:</u></b>	III

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Hazard label: 8  
 Classification code: C1  
 Limited quantity: 5 L

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

E1

**Marine transport (IMDG)**

**14.1. UN number:** UN1805  
**14.2. UN proper shipping name:** PHOSPHORIC ACID SOLUTION  
**14.3. Transport hazard class(es):** 8  
**14.4. Packing group:** III  
 Hazard label: 8  
 Special Provisions: 223  
 Limited quantity: 5 L  
 EmS: F-A, S-B

**Other applicable information (marine transport)**

E1

**Air transport (ICAO)**

**14.1. UN number:** UN1805  
**14.2. UN proper shipping name:** PHOSPHORIC ACID SOLUTION  
**14.3. Transport hazard class(es):** 8  
**14.4. Packing group:** III  
 Hazard label: 8  
 Special Provisions: A3 A803  
 Limited quantity Passenger: 1 L  
 IATA-packing instructions - Passenger: 852  
 IATA-max. quantity - Passenger: 5 L  
 IATA-packing instructions - Cargo: 856  
 IATA-max. quantity - Cargo: 60 L

**Other applicable information (air transport)**

E1

: Y841

**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)**

34 Causes burns.

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

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

Barium hydroxide, 50 g

CAS No: 12230-71-6  
EC No: 241-234-5**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, Xn - Harmful  
R phrases:  
Harmful by inhalation and in contact with skin.  
Causes burns.**Classification according to Regulation (EC) No. 1272/2008 [CLP]**Hazard categories:  
Acute toxicity: Acute Tox. 4  
Acute toxicity: Acute Tox. 4  
Skin corrosion/irritation: Skin Corr. 1B  
Hazard Statements:  
Harmful if swallowed.  
Harmful if inhaled.  
Causes severe skin burns and eye damage.**2.2. Label elements**Signal word: Danger  
Pictograms: GHS05-GHS07

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**Hazard statements**

H302 Harmful if swallowed.  
H332 Harmful if inhaled.  
H314 Causes severe skin burns and eye damage.

**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**

Sum formula:  $H_2BaO_2 \cdot 8H_2O$   
Molecular weight: 315,46

**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]	
241-234-5	Barium hydroxide	100 %
12230-71-6	C - Corrosive, Xn - Harmful R20/21-34	
	Acute Tox. 4, Acute Tox. 4, Skin Corr. 1B; H302 H332 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. In all cases of doubt, or when symptoms persist, seek medical advice.

**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. Do not allow a neutralisation agent to be drunk.

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

No data available

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**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.

**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

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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: solid  
 Colour: colourless  
 Odour: No data available

	Test method
pH-Value (at 20 °C):	12,5 50 g/l

#### Changes in the physical state

Melting point: 78 °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: 2,18 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

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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

**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, inhalant.

CAS No	Chemical name				
	Exposure routes	Method	Dose	Species	Source
12230-71-6	Barium hydroxide				
	oral	ATE	500 mg/kg		
	inhalative vapour	ATE	11 mg/l		
	inhalative aerosol	ATE	1,5 mg/l		

**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**

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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**

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>	UN3262
<b><u>14.2. UN proper shipping name:</u></b>	CORROSIVE SOLID, 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:	C6
Special Provisions:	274
Limited quantity:	1 kg
Transport category:	2
Hazard No:	80

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Tunnel restriction code: E

**Other applicable information (land transport)**

E2

**Inland waterways transport (ADN)**

**14.1. UN number:** UN3262  
**14.2. UN proper shipping name:** CORROSIVE SOLID, BASIC, INORGANIC, N.O.S.  
**14.3. Transport hazard class(es):** 8  
**14.4. Packing group:** II  
 Hazard label: 8  
 Classification code: C6  
 Special Provisions: 274  
 Limited quantity: 1 kg

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

E2

**Marine transport (IMDG)**

**14.1. UN number:** UN3262  
**14.2. UN proper shipping name:** ÄTZENDER BASISCHER ANORGANISCHER FESTER STOFF, N.A.G.  
**14.3. Transport hazard class(es):** 8  
**14.4. Packing group:** II  
 Hazard label: 8  
 Special Provisions: 274  
 Limited quantity: 1 kg  
 EmS: F-A, S-B

**Other applicable information (marine transport)**

E2

**Air transport (ICAO)**

**14.1. UN number:** UN3262  
**14.2. UN proper shipping name:** ÄTZENDER BASISCHER ANORGANISCHER FESTER STOFF, N.A.G.  
**14.3. Transport hazard class(es):** 8  
**14.4. Packing group:** II  
 Hazard label: 8  
 Special Provisions: A3 A803  
 Limited quantity Passenger: 5 kg  
 IATA-packing instructions - Passenger: 859  
 IATA-max. quantity - Passenger: 15 kg  
 IATA-packing instructions - Cargo: 863  
 IATA-max. quantity - Cargo: 50 kg

**Other applicable information (air transport)**

E2

: Y844

**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**

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### Barium hydroxide, 50 g

Print date: 15.04.2015

Product code: 9992065b

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#### 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)

20/21 Harmful by inhalation and in contact with skin.  
34 Causes burns.

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

H302 Harmful if swallowed.  
H314 Causes severe skin burns and eye damage.  
H332 Harmful if inhaled.



**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**Disodium hydrogenphosphate, 50 g**

Print date: 15.04.2015

Product code: 9992065c

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

Disodium hydrogenphosphate, 50 g

CAS No: 7558-79-4

EC No: 231-448-7

**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: HNa<sub>2</sub>O<sub>4</sub>P

Molecular weight: 141,96

**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

**Disodium hydrogenphosphate, 50 g**

Print date: 15.04.2015

Product code: 9992065c

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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

**Disodium hydrogenphosphate, 50 g**

Print date: 15.04.2015

Product code: 9992065c

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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

pH-Value (at 25 °C):

**Test method**  
 9 50 g/l

**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: 1,52 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: 4,90

Evaporation rate: No data available

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**Disodium hydrogenphosphate, 50 g**

Print date: 15.04.2015

Product code: 9992065c

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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****12.1. Toxicity**

No data available

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**Disodium hydrogenphosphate, 50 g**

Print date: 15.04.2015

Product code: 9992065c

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**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.

**Air transport (ICAO)**

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### Disodium hydrogenphosphate, 50 g

Print date: 15.04.2015

Product code: 9992065c

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#### 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

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**Iron, wool, 50 g**

Print date: 15.04.2015

Product code: 9992065d

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

Iron, wool, 50 g

CAS No: 7439-89-6  
EC No: 231-096-4**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: F - Highly flammable  
R phrases:  
Highly flammable.**Classification according to Regulation (EC) No. 1272/2008 [CLP]**Hazard categories:  
Flammable solid: Flam. Sol. 2  
Hazard Statements:  
Flammable solid.**2.2. Label elements**Signal word: Danger  
Pictograms: GHS02**Hazard statements**

H228 Flammable solid.

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### Iron, wool, 50 g

Print date: 15.04.2015

Product code: 9992065d

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#### Precautionary statements

P210

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

### SECTION 3: Composition/information on ingredients

#### 3.1. Substances

Sum formula: Fe  
Molecular weight: 55,85

#### 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]	
231-096-4	Iron, wool	100 %
7439-89-6	F - Highly flammable R11	
	Flam. Sol. 2; H228	

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.

##### 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

Water. 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

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

### SECTION 6: Accidental release measures



**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**Iron, wool, 50 g**

Print date: 15.04.2015

Product code: 9992065d

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

Remove all sources of ignition.

**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**

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**

Keep away from sources of ignition. - No smoking. Take precautionary measures against static 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****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:	silver grey
Odour:	No data available

pH-Value:

No data available

**Test method**

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**Iron, wool, 50 g**

Print date: 15.04.2015

Product code: 9992065d

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**Changes in the physical state**

Melting point:	1535 °C
Initial boiling point and boiling range:	2730 °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:	No data available
Vapour pressure:	No data available
Density (at 20 °C):	7,86 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
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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**

Keep away from heat. Ignition hazard.

**10.5. Incompatible materials**

Oxidizing agents, strong.

**SECTION 11: Toxicological information**

**11.1. Information on toxicological effects**

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**Iron, wool, 50 g**

Print date: 15.04.2015

Product code: 9992065d

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**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**

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**

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.

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**Iron, wool, 50 g**

Print date: 15.04.2015

Product code: 9992065d

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**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**

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

**SECTION 16: Other information****Relevant R-phrases (Number and full text)**

11 Highly flammable.

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

H228 Flammable solid.

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**N-(1-Naphthyl)-ethylenediamine dihydrochloride, 5 g**

Print date: 15.04.2015

Product code: 9992065e

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

N-(1-Naphthyl)-ethylenediamine dihydrochloride, 5 g

CAS No: 1465-25-4  
EC No: 215-981-2**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 Directive 67/548/EEC or 1999/45/EC**Indications of danger: Xi - Irritant  
R phrases:  
Irritating to eyes, respiratory system and skin.**Classification according to Regulation (EC) No. 1272/2008 [CLP]**Hazard categories:  
Skin corrosion/irritation: Skin Irrit. 2  
Serious eye damage/eye irritation: Eye Irrit. 2  
Specific target organ toxicity - single exposure: STOT SE 3  
Hazard Statements:  
Causes skin irritation.  
Causes serious eye irritation.  
May cause respiratory irritation.**2.2. Label elements**Signal word: Warning  
Pictograms: GHS07

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**N-(1-Naphthyl)-ethylenediamine dihydrochloride, 5 g**

Print date: 15.04.2015

Product code: 9992065e

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**Hazard statements**

H335 May cause respiratory irritation.  
H319 Causes serious eye irritation.  
H315 Causes skin irritation.

**Precautionary statements**

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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

**3.1. Substances**

Sum formula: C<sub>12</sub>H<sub>14</sub>N<sub>2</sub> · 2HCl  
Molecular weight: 259,17

**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]	
215-981-2	N-(1-Naphthyl)-ethylenediamine dihydrochloride	100 %
1465-25-4	Xi - Irritant R36/37/38	
	Skin Irrit. 2, Eye Irrit. 2, STOT SE 3; H315 H319 H335	

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. 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**

If product gets into the eye, keep eyelid open and rinse immediately with large quantities of water, for at least 5 minutes. Subsequently consult an ophthalmologist.

**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**

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**N-(1-Naphthyl)-ethylenediamine dihydrochloride, 5 g**

Print date: 15.04.2015

Product code: 9992065e

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**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.

**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.

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**N-(1-Naphthyl)-ethylenediamine dihydrochloride, 5 g**

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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: solid  
 Colour: colourless  
 Odour: No data available

**Test method**

pH-Value: No data available

**Changes in the physical state**

Melting point: 194 °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: 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**



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**N-(1-Naphthyl)-ethylenediamine dihydrochloride, 5 g**

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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**

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**

Irritating to eyes. Following inhalation: Lung irritation. Coughing. shortage of breath. After skin contact: Irritant.

**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

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### N-(1-Naphthyl)-ethylenediamine dihydrochloride, 5 g

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#### **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)**

##### **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**

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### N-(1-Naphthyl)-ethylenediamine dihydrochloride, 5 g

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#### 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)

36/37/38 Irritating to eyes, respiratory system and skin.

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

H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H335 May cause respiratory irritation.

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**Palladium(II) chloride, 2 g**

Print date: 15.04.2015

Product code: 9992065f

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

Palladium(II) chloride, 2 g

CAS No: 7647-10-1  
EC No: 231-596-2**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 Directive 67/548/EEC or 1999/45/EC**Indications of danger: T - Toxic  
R phrases:  
Toxic if swallowed.  
May cause sensitisation by skin contact.**Classification according to Regulation (EC) No. 1272/2008 [CLP]**Hazard categories:  
Acute toxicity: Acute Tox. 3  
Respiratory/skin sensitization: Skin Sens. 1  
Hazard Statements:  
Toxic if swallowed.  
May cause an allergic skin reaction.**2.2. Label elements**Signal word: Danger  
Pictograms: GHS06

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**Palladium(II) chloride, 2 g**

Print date: 15.04.2015

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**Hazard statements**

H301 Toxic if swallowed.  
H317 May cause an allergic skin reaction.

**Precautionary statements**

P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.

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

**3.1. Substances**

Sum formula: Cl<sub>2</sub>Pd  
Molecular weight: 177,33

**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]	
231-596-2	Palladium(II)-chlorid, 99%	100 %
7647-10-1	T - Toxic R25-43	
	Acute Tox. 3, Skin Sens. 1; H301 H317	

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. In all cases of doubt, or when symptoms persist, seek medical advice.

**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 water and seek medical advice.

**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.

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**Palladium(II) chloride, 2 g**

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**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.

**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).

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**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: 678 °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: 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

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**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, dermal.

CAS No	Chemical name				
	Exposure routes	Method	Dose	Species	Source
7647-10-1	Palladium(II)-chlorid, 99%				
	oral	ATE	100 mg/kg		

**Irritation and corrosivity**

No data available

**Sensitising effects**

May cause sensitisation by skin contact.

**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



**Safety Data Sheet**

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**Palladium(II) chloride, 2 g**

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**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)****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**

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### Palladium(II) chloride, 2 g

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#### 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)

- 25 Toxic if swallowed.
- 43 May cause sensitisation by skin contact.

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

- H301 Toxic if swallowed.
- H317 May cause an allergic skin reaction.

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**Potassium dihydrogen phosphate, 50 g**

Print date: 15.04.2015

Product code: 9992065g

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

Potassium dihydrogen phosphate, 50 g

CAS No: 7778-77-0

EC No: 231-913-4

**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: H<sub>2</sub>KO<sub>4</sub>P

Molecular weight: 136,09

**SECTION 4: First aid measures****4.1. Description of first aid measures****After inhalation**

Provide fresh air.

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**Potassium dihydrogen phosphate, 50 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

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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: 252,6 °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: 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

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**Potassium dihydrogen phosphate, 50 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**

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**Potassium dihydrogen phosphate, 50 g**

Print date: 15.04.2015

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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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### Potassium dihydrogen phosphate, 50 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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according to Regulation (EC) No 1907/2006

**Sulfanilamide, 50 g**

Print date: 15.04.2015

Product code: 9992065h

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

Sulfanilamide, 50 g

CAS No: 63-74-1  
EC No: 200-563-4**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**

This substance is not classified as hazardous according to Directive 67/548/EEC.

**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: C<sub>6</sub>H<sub>8</sub>N<sub>2</sub>O<sub>2</sub>S  
Molecular weight: 172,20**SECTION 4: First aid measures****4.1. Description of first aid measures****After inhalation**

Provide fresh air.

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**Sulfanilamide, 50 g**

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**After contact with skin**

Wash with plenty of water. Take off contaminated clothing and wash it before reuse.

**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**

Take off 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

<b>Sulfanilamide, 50 g</b>
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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:	164 °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:	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

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**Sulfanilamide, 50 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**

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

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

No data available

**Other observations**

No data available

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

## Safety Data Sheet

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### Sulfanilamide, 50 g

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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**

According to the criteria of the European classification and labelling system, the substance/the product has not to be labelled as "dangerous for the environment".

### 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**

Wash with plenty of water. 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)**

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### Sulfanilamide, 50 g

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#### 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

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**Bromocresol green, 5 g**

Print date: 15.04.2015

Product code: 9992065i

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

Bromocresol green, 5 g

CAS No: 76-60-8  
EC No: 200-972-8**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 Directive 67/548/EEC or 1999/45/EC**

This substance is not classified as hazardous according to Directive 67/548/EEC.

**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: C<sub>21</sub>H<sub>14</sub>Br<sub>4</sub>O<sub>5</sub>S  
Molecular weight: 698,01**SECTION 4: First aid measures****4.1. Description of first aid measures****After inhalation**

Provide fresh air.

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**Bromocresol green, 5 g**

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**After contact with skin**

Wash with plenty of water. Take off contaminated clothing and wash it before reuse.

**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**

Take off 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

**Bromocresol green, 5 g**

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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: 255 °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: 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

**Safety Data Sheet**

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**Bromocresol green, 5 g**

Print date: 15.04.2015

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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****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.

**Specific effects in experiment on an animal**

No data available

**Additional information on tests**

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

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

No data available

**Other observations**

No data available

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

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**Bromocresol green, 5 g**

Print date: 15.04.2015

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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**

According to the criteria of the European classification and labelling system, the substance/the product has not to be labelled as "dangerous for the environment".

**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**

Wash with plenty of water. 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)**

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### Bromocresol green, 5 g

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#### 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