

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**1,10 Phenanthroline, 5 g**

Print date: 15.04.2015

Product code: 9991786

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

1,10 Phenanthroline, 5 g

CAS No: 66-71-7  
Index No: 613-092-00-8  
EC No: 200-629-2

**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, N - Dangerous for the environment

R phrases:

Toxic if swallowed.

Very toxic to aquatic organisms.

May cause long-term adverse effects in the aquatic environment.

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

Hazard categories:

Acute toxicity: Acute Tox. 3

Hazardous to the aquatic environment: Aquatic Acute 1 (M-Factor = 1)

Hazardous to the aquatic environment: Aquatic Chronic 1 (M-Factor = 1)

Hazard Statements:

Toxic if swallowed.

Very toxic to aquatic life.

Very toxic to aquatic life with long lasting effects.

**2.2. Label elements****Hazardous components which must be listed on the label**

morfamquat sulfate

Signal word: Danger

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Pictograms:

GHS06-GHS09



#### Hazard statements

- H301 Toxic if swallowed.  
H410 Very toxic to aquatic life with long lasting effects.

#### Precautionary statements

- P273 Avoid release to the environment.  
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.  
P501 Dispose of contents/container to Waste management.

#### 2.3. Other hazards

No information available.

### SECTION 3: Composition/information on ingredients

#### 3.1. Substances

Sum formula: C<sub>12</sub>H<sub>8</sub>N<sub>2</sub>  
Molecular weight: 180,21

#### 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]	
200-629-2	morfamquat sulfate	100 %
66-71-7	T - Toxic, N - Dangerous for the environment R25-50-53	
613-092-00-8	Acute Tox. 3, Aquatic Acute 1, Aquatic Chronic 1; H301 H400 H410	

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

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

##### After inhalation

Provide fresh air. Medical treatment necessary.

##### After contact with skin

Wash with plenty of water. Immediately remove any contaminated clothing, shoes or stockings.  
Medical treatment necessary.

##### After contact with eyes

After eye contact: Rinse immediately carefully and thoroughly with eye-bath or water. Consult an ophthalmologist.

##### After ingestion

Rinse mouth immediately and drink plenty of water. Induce vomiting when the affected person is not unconscious. Call a physician immediately.

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

No information available.

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

Treat symptomatically.

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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**

Non-flammable.

**5.3. Advice for firefighters**

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

**Additional information**

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

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

Provide adequate ventilation. Avoid generation of dust. Do not breathe dust. Avoid contact with skin, eyes and clothes. Use 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.

**6.4. Reference to other sections**

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

**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. Avoid generation of dust. Do not breathe dust.

**Advice on protection against fire and explosion**

No special fire protection measures are necessary.

**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.

**Advice on storage compatibility**

No special measures are necessary.

**Further information on storage conditions**

Store in a cool dry place.

Protect against: moisture.

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

none

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

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#### 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. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink.

##### Eye/face protection

Wear eye/face protection.

##### Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

##### Skin protection

Wear suitable protective clothing.

##### Respiratory protection

In case of inadequate ventilation wear respiratory protection.

### SECTION 9: Physical and chemical properties

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

Physical state: solid  
Colour: colourless

#### Test method

pH-Value: not determined

##### Changes in the physical state

Melting point: 97 °C

Initial boiling point and boiling range: not determined

Flash point: not applicable

##### Flammability

Solid: not determined

Gas: not applicable

Lower explosion limits: not determined

Upper explosion limits: not determined

##### Auto-ignition temperature

Solid: not determined

Gas: not applicable

Decomposition temperature: not determined

##### Oxidizing properties

Not oxidizing.

Vapour pressure: not determined

Density: not determined

Water solubility: insoluble

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#### Solubility in other solvents

not determined

Partition coefficient:

not determined

Vapour density:

not determined

Evaporation rate:

not determined

#### 9.2. Other information

Solid content:

not determined

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

No hazardous reaction when handled and stored according to provisions.

#### 10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

#### 10.3. Possibility of hazardous reactions

No known hazardous reactions.

#### 10.4. Conditions to avoid

none

#### 10.5. Incompatible materials

No information available.

#### 10.6. Hazardous decomposition products

No known hazardous decomposition products.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

##### Acute toxicity

CAS No	Chemical name				
	Exposure routes	Method	Dose	Species	Source
66-71-7	morfamquat sulfate				
	oral	ATE	100 mg/kg		

##### Additional information on tests

This mixture is classified as hazardous according to 1999/45/EC. Special hazards arising from the substance or mixture!

### SECTION 12: Ecological information

#### 12.1. Toxicity

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

#### 12.2. Persistence and degradability

The product has not been tested.

#### 12.3. Bioaccumulative potential

The product has not been tested.

#### 12.4. Mobility in soil

The product has not been tested.

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

The product has not been tested.

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**12.6. Other adverse effects**

No information available.

**Further information**

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

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

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

**Contaminated packaging**

This material and its container must be disposed of as hazardous waste. Handle contaminated packages in the same way as the substance itself.

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

<b>14.1. UN number:</b>	UN 2811
<b>14.2. UN proper shipping name:</b>	TOXIC SOLID, ORGANIC, N.O.S.
<b>14.3. Transport hazard class(es):</b>	6.1
<b>14.4. Packing group:</b>	III
Hazard label:	6.1
Classification code:	T2
Special Provisions:	274 614
Limited quantity:	5 kg
Transport category:	2
Hazard No:	60
Tunnel restriction code:	E

**Other applicable information (land transport)**

E1

**Inland waterways transport (ADN)**

<b>14.1. UN number:</b>	UN 2811
<b>14.2. UN proper shipping name:</b>	TOXIC SOLID, ORGANIC, N.O.S.
<b>14.3. Transport hazard class(es):</b>	6.1
<b>14.4. Packing group:</b>	III
Hazard label:	6.1
Classification code:	T2
Special Provisions:	274 614 802
Limited quantity:	5 kg

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

E1

**Marine transport (IMDG)**

<b>14.1. UN number:</b>	UN 2811
<b>14.2. UN proper shipping name:</b>	TOXIC SOLID, ORGANIC, N.O.S.
<b>14.3. Transport hazard class(es):</b>	6.1
<b>14.4. Packing group:</b>	III
Hazard label:	6.1

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Special Provisions: 223, 274  
 Limited quantity: 5 kg  
 EmS: F-A, S-A

**Other applicable information (marine transport)**

E1

**Air transport (ICAO)**

**14.1. UN number:** UN 2811  
**14.2. UN proper shipping name:** TOXIC SOLID, ORGANIC, N.O.S.  
**14.3. Transport hazard class(es):** 6.1  
**14.4. Packing group:** III  
 Hazard label: 6.1  
 Special Provisions: A3 A5  
 Limited quantity Passenger: 10 kg  
 IATA-packing instructions - Passenger: 670  
 IATA-max. quantity - Passenger: 100 kg  
 IATA-packing instructions - Cargo: 677  
 IATA-max. quantity - Cargo: 200 kg

**Other applicable information (air transport)**

E1

: Y645

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: yes

**14.6. Special precautions for user**

No information available.

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

not applicable

## SECTION 15: Regulatory information

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

**EU regulatory information**

**Additional information**

To follow: 850/2004/EC , 79/117/EEC , 689/2008/EC

**National regulatory information**

Employment restrictions: Observe employment restrictions for young people. Observe employment restrictions for child bearing mothers and nursing.  
 Water contaminating class (D): 3 - highly water contaminating

**15.2. Chemical safety assessment**

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

## SECTION 16: Other information

**Abbreviations and acronyms**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)  
 IMDG: International Maritime Code for Dangerous Goods  
 IATA: International Air Transport Association  
 GHS: Globally Harmonized System of Classification and Labelling of Chemicals  
 EINECS: European Inventory of Existing Commercial Chemical Substances  
 ELINCS: European List of Notified Chemical Substances

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CAS: Chemical Abstracts Service

LC50: Lethal concentration, 50%

LD50: Lethal dose, 50%

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

- 25 Toxic if swallowed.
- 50 Very toxic to aquatic organisms.
- 53 May cause long-term adverse effects in the aquatic environment.

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

- H301 Toxic if swallowed.
- H400 Very toxic to aquatic life.
- H410 Very toxic to aquatic life with long lasting effects.

**Further Information**

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.