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**Extinguishing material that may not be used for safety reasons**

no

**Special exposure hazards arising from the substance, combustible products or resulting gases**

In case of fire formation of dangerous gases possible.

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

**Special protective equipment for firefighters**

Do not inhale explosion and/or combustion gases.

**Additional information**

Collect contaminated firefighting water separately, must not be discharged into the drains.

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**6. Accidental release measures**

**Personal precautions**

Avoid dust formation.

**Environmental precautions**

Do not discharge into the drains or bodies of water..

**Methods for cleaning up/taking up**

Disposal according to regulations.

Flush away residues with water.

Take up mechanically and send for disposal.

**Additional Information**

Informations for safe handling look up chapter 7.

Informations for personal protective equipment look up chapter 8.

Informations for disposal look up chapter 13.

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**7. Handling and storage**

**Advice on safe handling**

No special measures necessary if used correctly.

Take the usual precautions when handling with chemicals.

**Advice on protection against fire and explosion**

The product is not combustible.

No special measures necessary.

**Requirements for storage rooms and vessels**

No special measures required.

**Advice on storage compatibility**

Keep away from water.

**Further information on storage conditions**

Store in a dry place.

Product is hygroscopic.

**Storage group** 13

**Information on storage stability**

Unlimited stability.



## 8. Exposure controls / personal protection

### Additional advice on system design

no

### Respiratory protection

In case of dust formation wear micro dust mask.

### Hand protection

Rubber gloves

### Eye protection

tightly fitting goggles

### Skin protection

no

### General protective measures

no

### Hygiene measures

Do not eat or drink when working.

Brush soiled clothing.

After work wash thoroughly.

## 9. Physical and chemical properties

### Form

crystalline

### Colour

whitish

### Odour

odourless

### Data relevant for safety

	Value	Temperature	at	Method	Remark
<b>pH value in delivery state</b>	7	20°C	340 g/l	DIN 38404-5	g MgSO <sub>4</sub> / l H <sub>2</sub> O
<b>starts to melt</b>	> 48 °C				
<b>Flash point</b>	not applicable				
<b>Flammable solid</b>	no				
<b>Combustion temperature</b>	no				
<b>Autoignition</b>	no				
<b>Vapour pressure</b>	10,6 mbar	20 °C			H <sub>2</sub> O
<b>Density</b>	1,7 g/cm <sup>3</sup>	20 °C	1013 hPa		
<b>Bulk density</b>	abt. 1000 kg/m <sup>3</sup>				
<b>Solubility in water</b>	340 g/l	20 °C	1013 hPa		
<b>Solubility/other</b>	not determined				



	Value	Temperature	at	Method	Remark
<b>Partition coefficient (log p<sub>OW</sub>)</b>	not determined				
<b>Combustion value</b>	1				

**Oxidizing properties**

no

**Explosive properties**

no

**Additional information**

Physical dates refer to pure product.

**10. Stability and reactivity**

**Conditions to avoid**

No hazardous reactions known.

**Materials to avoid**

No hazardous reactions known.

**Hazardous decomposition products**

Toxic gases/vapours

Sulphurous oxides (SO<sub>x</sub>)

**Thermal decomposition**

Remark >700°C

**11. Toxicological information**

**Acute toxicity/Irritability/Sensitization**

	Value/Validation	Species	Method	Remark
<b>LD 50 acute oral</b>	not determined			
<b>LD 50 acute dermal</b>	not determined			
<b>LC 50 acute inhalation</b>	not determined			
<b>Irritability skin</b>	no			experiences
<b>Irritability eye</b>	no			experiences
<b>Sensitization skin</b>	no			experiences
<b>Sensitization respiratory system</b>	no			experiences

**Toxicity test (Additional information)**

No experimental indication of genotoxic effects.

Substance has no mutagen activity ( Ames test ).



### Additional information

Toxicological data refer to pure product.

Our data do not cover total texture toxic judgement. Follow the usual hygienic directives for handling with chemicals.

## 12. Ecological information

### Data on elimination (persistence and degradability)

	Elimination rate	Method of analysis	Method	Validation
<b>Physico-chemical degradability</b>	Inorganic product, cannot be eliminated from the water by biological purification processes.		not applicable	
<b>Biological degradability</b>	Inorganic product, cannot be eliminated from the water by biological purification processes.		not applicable	
<b>Degradability</b>	Inorganic product, cannot be eliminated from the water by biological purification processes.		not applicable	
<b>Biological eliminability</b>	Inorganic product, cannot be eliminated from the water by biological purification processes.		not applicable	

### Ecotoxicological effects

	Value	Species	Method	Validation
<b>Fish</b>	LC50 28670 mg/l (24 h)	Leuciscus idus	DIN 38412 L15	Ref. (1)
<b>Daphnia</b>	EC50 3480 mg/l (24 h)	Daphnia magna	DIN 38412 L11	Ref. (1)
<b>Algae</b>	EC50 5530 mg/l (72 h)	Scenedesmus subspicatus	DIN 38412 L34	Ref. (1)
<b>Bacteria</b>	EC50 172000 mg/l (30 min)	Photobacterium phosphoreum	DIN 38412 L9	Ref. (1)

### Behaviour in sewage plant

When low concentrations are discharged correctly into adapted biological sewage treatment plants, interference with the degradation activity of activated sludge is not likely.

### Additional ecological information

	Value	Method	Remark
<b>AOX</b>	not applicable		

### General regulation

Product is not allowed to discharge into aquatic environment.

## 13. Disposal considerations

### Waste code No.

02 01 09  
06 03 14

### Name of waste

agrochemical waste other than those mentioned in 02 01 08  
solid salts and solutions other than those mentioned in 06 03 11 and 06 03 13



**Recommendations for the product**

In accordance with regulations for special waste, must be taken, after pretreatment, to an authorised special waste disposal site.

**Recommendations for packaging**

Uncontaminated packaging may be taken for recycling.

Contaminated packaging should be emptied as far as possible and after appropriate cleansing may be taken for reuse.

**Recommended cleansing agent**

no

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**14. Transport information**

**Land and inland navigation transport (ADR/RID/GGVS/GGVE/ADNR)**

**Remarks**

No hazardous material as defined by the prescriptions.

**Transport/further informations**

no

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**15. Regulatory information**

**Remarks for classification**

no

**R-phrases**

not applicable

**S-phrases**

not applicable

**Special labelling for certain preparations**

no

**National regulations**

**Restriction of occupation**

no

**Decree for case of interference/remarks**

not applicable

**Classification according to VbF/remarks**

VbF: is not subject to decree for compostible liquids.

**German TA LUFT remarks**

not applicable

**Water hazard class**

1 KBwS-classification

**Other regulations, restrictions and prohibition regulations**

no

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## 16. Other information

### Recommend uses and restrictions

no

### Further information

The information contained herein is based on our present knowledge and is not meant to guarantee product properties. Recipients of our product must take responsibility for observing existing laws and regulations.

Refer to product information paper.

All declarations of safety-data-sheet refer to pure substance.

CAS-No. refers to pure substance.

### Sources of key data used

Ref. (1): INNOLAB GmbH & CO.KG, Niedervellmarsche Str. 30, D-34233 Fulda, Project No.: 04/926035, 1994