

# Safety Data Sheet

According to EC Directive 91/155/EEC

Date of issue: 20.04.2006  
Supersedes edition of 19.06.2004

## 1. Identification of the substance/preparation and of the company/undertaking

### *Identification of the product*

Catalogue No.: 106513  
Product name: Sodium thiosulfate pentahydrate pure

### *Use of the substance/preparation*

Reagent for analysis  
Chemical production

### *Company/undertaking identification*

Company: Merck KGaA \* 64271 Darmstadt \* Germany \* Phone: +49 6151 72-0  
Emergency telephone No.: Please contact the regional Merck representation  
in your country.

## 2. Composition/information on ingredients

### *Synonyms*

Antichlor

CAS-No.: 10102-17-7  
*M*: 248.21 g/mol EC-No.: 231-867-5  
Formula Hill:  $\text{Na}_2\text{O}_3\text{S}_2 \cdot 5 \text{H}_2\text{O}$

## 3. Hazards identification

No hazardous product as specified in Directive 67/548/EEC.

## 4. First aid measures

After inhalation: fresh air.  
After skin contact: wash off with plenty of water. Remove contaminated clothing.  
After eye contact: rinse out with plenty of water with the eyelid held wide open.  
After swallowing: make victim drink plenty of water. Consult doctor if feeling unwell.

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## 5. Fire-fighting measures

Suitable extinguishing media:  
In adaption to materials stored in the immediate neighbourhood.

Special risks:  
Non-combustible. Ambient fire may liberate hazardous vapours. The following may develop in event of fire: sulfur oxides.

Special protective equipment for fire fighting:  
Do not stay in dangerous zone without self-contained breathing apparatus.

Other information:  
Contain escaping vapours with water. Prevent fire-fighting water from entering surface water or groundwater.

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## 6. Accidental release measures

Person-related precautionary measures:  
Avoid generation of dusts; do not inhale dusts.

Environmental-protection measures:  
Do not allow to enter sewerage system.

Procedures for cleaning / absorption:  
Take up dry. Forward for disposal. Clean up affected area.

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## 7. Handling and storage

*Handling:*

No further requirements.

*Storage:*

Tightly closed. Dry. Storage temperature: no restrictions.

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## 8. Exposure controls/personal protection

*Personal protective equipment:*

Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier.

Respiratory protection: required when dusts are generated. Filter P 1 (acc. to DIN 3181) for solid particles of inert substances.

Eye protection: required

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Hand protection:

In full contact:  
Glove material: nitrile rubber  
Layer thickness: 0.11 mm  
Breakthrough time: > 480 Min.

In splash contact:  
Glove material: nitrile rubber  
Layer thickness: 0.11 mm  
Breakthrough time: > 480 Min.

The protective gloves to be used must comply with the specifications of EC directive 89/686/EEC and the resultant standard EN374, for example KCL 741 Dermatril® L (full contact), 741 Dermatril® L (splash contact). The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types.

This recommendation applies only to the product stated in the safety data sheet and supplied by us as well as to the purpose specified by us. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

Industrial hygiene:  
Change contaminated clothing. Wash hands after working with substance.

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## 9. Physical and chemical properties

Form:	solid		
Colour:	colourless		
Odour:	odourless		
pH value at 100 g/l H <sub>2</sub> O	(20 °C)	6.0-7.5	
Melting point		48	°C
Boiling point		not applicable	
Ignition temperature		not combustible	
Flash point		not flammable	
Explosion limits	lower	not applicable	
	upper	not applicable	
Density	(20 °C)	1.74	g/cm <sup>3</sup>
Bulk density		~ 1000	kg/m <sup>3</sup>
Solubility in water	(20 °C)	701	g/l
Thermal decomposition		100	°C (release of crystalline water)
log Pow		-4.53	(anhydrous substance) (calculated)

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## 10. Stability and reactivity

### *Conditions to be avoided*

Strong heating (decomposition).

### *Substances to be avoided*

Risk of explosion with: nitrates, nitrites, peroxi compounds, strong oxidizing agents.

Violent reactions possible with: fluorine, acids.

### *Hazardous decomposition products*

in the event of fire: See chapter 5.

### *Further information*

releases water of crystallization when heated.

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## 11. Toxicological information

### *Acute toxicity*

LD<sub>50</sub> (oral, rat): >5000 mg/kg (anhydrous substance) (RTECS).

### *Subacute to chronic toxicity*

Bacterial mutagenicity: Ames test: negative. (Lit.)

### *Further toxicological information*

Hazardous properties cannot be excluded but are unlikely when the product is handled appropriately.

### *Further data*

The product should be handled with the care usual when dealing with chemicals.

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## 12. Ecological information

Behavior in environmental compartments:

Distribution: log Pow: -4.53 (anhydrous substance) (calculated).

No bioaccumulation is to be expected (log Pow <1).

Ecotoxic effects:

Biological effects:

Fish toxicity: P.promelas LC<sub>50</sub>: >10000 mg/l /96 h (External MSDS).

Daphnia toxicity: Daphnia magna EC<sub>50</sub>: 1223 mg/l /48 h (External MSDS).

Further ecologic data:

COD: 0.405 g/g (anhydrous substance) (IUCLID).

Do not allow to enter waters, waste water, or soil!

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## 13. Disposal considerations

### *Product:*

Chemicals must be disposed of in compliance with the respective national regulations. Under [www.retrologistik.de](http://www.retrologistik.de) you will find country- and substance-specific information as well as contact partners.

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## *Packaging:*

Merck product packaging must be disposed of in compliance with the country-specific regulations or must be passed to a packaging return system. Under [www.retrologistik.de](http://www.retrologistik.de) you will find special information on the respective national conditions as well as contact partners.

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## **14. Transport information**

Not subject to transport regulations.

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## **15. Regulatory information**

### *Labelling according to EC Directives*

Symbol: ---

R-phrases: ---

S-phrases: ---

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## **16. Other information**

### *Reason for alteration*

Chapter 11: toxicological information.

Chapter 12: ecological information.

General update.

### *Regional representation:*

This information is given on the authorised Safety Data Sheet for your country.

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*The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of the properties of the product.*