

SAFETY DATA SHEET according to Regulation (EC) No. 1907/2006

## **SODIUM THIOSULPHATE PENTAHYDRATE (CHLORINE REDUCER)**

Version 4.3

Print Date 2018/07/09

Revision date / valid from 2018/07/09

MSDS code: MSTU300

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

#### **1.1. Product identifier**

Trade name : SODIUM THIOSULPHATE PENTAHYDRATE (CHLORINE REDUCER)  
Substance name : Sodium thiosulfate pentahydrate  
CAS-No. : 10102-17-7  
EC-No. : 231-867-5  
EU REACH-Reg. No. : 01-2119531537-38-xxxx

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

Use of the Substance/Mixture : Laboratory chemicals, Reducing agents, Water treatment chemical  
Uses advised against : At this moment we have not identified any uses advised against

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

Company : Brenntag UK Limited  
Alpha House, Lawnswood Business Park  
GB LS16 6QY Leeds  
Telephone : +44 (0) 113 3879 200  
Telefax : +44 (0) 113 3879 280  
E-mail address : msds@brenntag.co.uk

#### **1.4. Emergency telephone number**

Emergency telephone number : Emergency only telephone number (open 24 hours):  
+44 (0) 1865 407333 (N.C.E.C. Culham)

### **SECTION 2: Hazards identification**

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

##### **Classification according to Regulation (EC) No 1272/2008**

The product is not classified as dangerous according to Regulation (EC) No. 1272/2008.

##### **Most important adverse effects**

Human Health : See section 11 for toxicological information.

## SODIUM THIOSULPHATE PENTAHYDRATE (CHLORINE REDUCER)

Physical and chemical hazards : See section 9/10 for physicochemical information.  
 Potential environmental effects : See section 12 for environmental information.

### 2.2. Label elements

#### Labelling according to Regulation (EC) No 1272/2008

The product is not labeled as dangerous according to Regulation (EC) No. 1272/2008.

### 2.3. Other hazards

For Results of PBT and vPvB assessment see section 12.5.

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Remarks : No dangerous ingredients according to Regulation (EC) No. 1907/2006

#### Non-hazardous component

Chemical name	Identification Number	Amount [%]
Sodium thiosulfate pentahydrate	CAS-No. : 10102-17-7	<= 100
	EC-No. 231-867-5	
	REACH-Reg. No. 01-2119531537-38-xxxx	

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

General advice : No special precautions required.

If inhaled : Move to fresh air. If symptoms persist, call a physician.

In case of skin contact : If on skin, rinse well with water. If skin irritation persists, call a physician.

In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 10 minutes. If eye irritation persists, consult a specialist.

If swallowed : Rinse mouth with water. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.

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

Symptoms	: See Section 11 for more detailed information on health effects and symptoms.
Effects	: Health injuries are not known or expected under normal use. See Section 11 for more detailed information on health effects and symptoms.

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

Treatment	: Treat symptomatically.
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## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media	: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	: High volume water jet

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

Specific hazards during firefighting	: Heating or fire can release toxic gas.
Hazardous combustion products	: sulphur dioxide, Carbon monoxide, Carbon dioxide (CO <sub>2</sub> )

### 5.3. Advice for firefighters

Special protective equipment for firefighters	: In the event of fire, wear self-contained breathing apparatus. Wear personal protective equipment.
Further advice	: Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

## SECTION 6: Accidental release measures

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

Personal precautions	: Use personal protective equipment. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing.
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### 6.2. Environmental precautions

Environmental precautions	: Do not flush into surface water or sanitary sewer system. Avoid subsoil penetration.
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### 6.3. Methods and materials for containment and cleaning up

Methods and materials for containment and cleaning up	: Use mechanical handling equipment. Keep in suitable, closed containers for disposal.
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## SODIUM THIOSULPHATE PENTAHYDRATE (CHLORINE REDUCER)

Further information : Treat recovered material as described in the section "Disposal considerations".

### 6.4. Reference to other sections

See Section 1 for emergency contact information.  
See Section 8 for information on personal protective equipment.  
See Section 13 for waste treatment information.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Advice on safe handling : Keep container tightly closed. Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Avoid dust formation in confined areas. Do not breathe vapours/dust.

Hygiene measures : Keep away from food, drink and animal feedingstuffs. Smoking, eating and drinking should be prohibited in the application area. Wash hands before breaks and at the end of workday. Remove and wash contaminated clothing before re-use.

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

Requirements for storage areas and containers : Store in original container.

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Further information on storage conditions : Keep tightly closed in a dry and cool place. Avoid moisture. Keep in a well-ventilated place.

Advice on common storage : Keep away from food, drink and animal feedingstuffs. Incompatible with oxidizing agents. Incompatible with strong acids and bases.

### 7.3. Specific end use(s)

Specific use(s) : No information available.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Other Occupational Exposure Limit Values

(Additional) Information : Contains no substances with occupational exposure limit values.

## SODIUM THIOSULPHATE PENTAHYDRATE (CHLORINE REDUCER)

<b>Component:</b>	<b>Sodium thiosulfate pentahydrate</b>	<b>CAS-No. 10102-17-7</b>
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### Derived No Effect Level (DNEL)/Derived Minimal Effect Level (DMEL)

#### DNEL

Workers, Long-term - systemic effects, Inhalation : 374 mg/m<sup>3</sup>

#### DNEL

Consumers, Long-term - systemic effects, Inhalation : 110 mg/m<sup>3</sup>

#### DNEL

Consumers, Long-term - systemic effects, Oral : 14 mg/kg bw/day

### Derived No Effect Level (DNEL)/Derived Minimal Effect Level (DMEL)

#### DNEL

Workers, Long-term - systemic effects, Inhalation : 374 mg/m<sup>3</sup>

#### DNEL

Consumers, Long-term - systemic effects, Inhalation : 110 mg/m<sup>3</sup>

#### DNEL

Consumers, Long-term - systemic effects, Oral : 14 mg/kg bw/day

## 8.2. Exposure controls

### Appropriate engineering controls

Refer to protective measures listed in sections 7 and 8.

### Personal protective equipment

#### *Respiratory protection*

Advice : If ventilation is insufficient, suitable respiratory protection must be provided  
 Required, if exposure limit is exceeded (e.g. OEL).  
 In the case of dust or aerosol formation use respirator with an approved filter.  
 Respiratory protection complying with EN 141.

#### *Hand protection*

Advice : Protective gloves complying with EN 374.  
 Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves.  
 Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.  
 Protective gloves should be replaced at first signs of wear.

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Advice : Protective gloves complying with EN 374.  
The glove material has to be impermeable and resistant to the product / the substance / the preparation.  
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Material : Nitrile rubber  
Glove thickness :  $\geq 0.5$  mm

Material : Natural Rubber

*Eye protection*

Advice : Safety goggles

*Skin and body protection*

Advice : Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.  
Wear appropriate chemical resistant clothing and boots.

*Protective measures*

Advice : The usual precautionary measures for the handling of chemicals have to be observed.

**Environmental exposure controls**

General advice : Do not flush into surface water or sanitary sewer system.  
Avoid subsoil penetration.

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

Form : crystalline  
Colour : white  
Odour : odourless  
Odour Threshold : no data available  
pH : 6.0 - 8.4 5% solution  
Melting point/range : 48 °C

**SODIUM THIOSULPHATE PENTAHYDRATE (CHLORINE REDUCER)**

Boiling point/boiling range	: > 100 °C
Flash point	: no data available
Evaporation rate	: no data available
Flammability (solid, gas)	: The product is not flammable.
Upper explosion limit	: no data available
Lower explosion limit	: no data available
Vapour pressure	: no data available
Relative vapour density	: no data available
Relative density	: no data available
Water solubility	: 790 g/l (4 °C) soluble 680 g/l (20 °C) soluble
Partition coefficient: n-octanol/water	: no data available
Auto-ignition temperature	: no data available
Thermal decomposition	: no data available
Viscosity, dynamic	: no data available
Explosivity	: Product is not explosive.
Oxidizing properties	: no data available

**9.2. Other information**

Molecular weight	: 248.18 g/mol
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**SECTION 10: Stability and reactivity****10.1. Reactivity**

Advice	: No decomposition if stored and applied as directed.
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**10.2. Chemical stability**

Advice	: Stable under recommended storage conditions.
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**10.3. Possibility of hazardous reactions**

Hazardous reactions	: Contact with acids liberates toxic gas.
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**10.4. Conditions to avoid**

**SODIUM THIOSULPHATE PENTAHYDRATE (CHLORINE REDUCER)**

Conditions to avoid : Exposure to moisture

**10.5. Incompatible materials**

Materials to avoid : Keep away from oxidising agents, strongly alkaline and strongly acid materials.

**10.6. Hazardous decomposition products**

Hazardous decomposition products : sulphur dioxide, Carbon oxides

**SECTION 11: Toxicological information**
**11.1. Information on toxicological effects**

Component:	Sodium thiosulfate pentahydrate	CAS-No. 10102-17-7
<b>Irritation</b>		
<b>Skin</b>		
Result	: No skin irritation (Rabbit) (OECD Test Guideline 404)Read-across (Analogy)	
<b>Eyes</b>		
Result	: No eye irritation (Rabbit) (OECD - Guideline 405)Read-across (Analogy)	
<b>Sensitisation</b>		
Result	: not sensitizing (Mouse) (OECD Test Guideline 429)Read-across (Analogy)	
<b>Specific Target Organ Toxicity</b>		
<b>Single exposure</b>		
Remarks	: Not classified due to lack of data.	
<b>Repeated exposure</b>		
Remarks	: Not classified due to lack of data.	
<b>Other toxic properties</b>		
<b>Aspiration hazard</b>		
Not applicable,		



**SODIUM THIOSULPHATE PENTAHYDRATE (CHLORINE REDUCER)****SECTION 12: Ecological information****12.1. Toxicity**

Data for the product
Acute toxicity
Fish

: no data available

**12.2. Persistence and degradability**

Data for the product
Persistence and degradability
Biodegradability

Result : no data available

Component:	Sodium thiosulfate pentahydrate	CAS-No. 10102-17-7
Persistence and degradability		
Biodegradability		

Result : no data available

**12.3. Bioaccumulative potential**

Data for the product
Bioaccumulation

Result : no data available

Component:	Sodium thiosulfate pentahydrate	CAS-No. 10102-17-7
Bioaccumulation		

Result : no data available

**12.4. Mobility in soil**

Data for the product
Mobility

Result : no data available

## SODIUM THIOSULPHATE PENTAHYDRATE (CHLORINE REDUCER)

<b>Component:</b>	<b>Sodium thiosulfate pentahydrate</b>	<b>CAS-No. 10102-17-7</b>
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### Mobility

Water : Good soluble in water.  
Air : not volatile

### 12.5. Results of PBT and vPvB assessment

#### Data for the product

#### Results of PBT and vPvB assessment

Result :  
Result : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

<b>Component:</b>	<b>Sodium thiosulfate pentahydrate</b>	<b>CAS-No. 10102-17-7</b>
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#### Results of PBT and vPvB assessment

Result : No assesment is required for inorganic substances.

### 12.6. Other adverse effects

#### Data for the product

#### Additional ecological information

Result : Do not flush into surface water or sanitary sewer system. Avoid subsoil penetration.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Product : Disposal together with normal waste is not allowed. Special disposal required according to local regulations. Do not let product enter drains. Contact waste disposal services.

Contaminated packaging : Dispose of contaminated packaging in the same way as the product. In accordance with local and national regulations.

European Waste Catalogue Number : No waste code according to the European Waste Catalogue can be assigned for this product, as the intended use dictates the assignment. The waste code is established in consultation with the regional waste disposer.

## SECTION 14: Transport information

**SODIUM THIOSULPHATE PENTAHYDRATE (CHLORINE REDUCER)**

Not dangerous goods for ADR, RID, IMDG and IATA.

**14.1. UN number**

Not applicable.

**14.2. UN proper shipping name**

Not applicable.

**14.3. Transport hazard class(es)**

Not applicable.

**14.4. Packaging group**

Not applicable.

**14.5. Environmental hazards**

Not applicable.

**14.6. Special precautions for user**

Not applicable.

**14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

IMDG : Not applicable.

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

<b>Component:</b>	<b>Sodium thiosulfate pentahydrate</b>	<b>CAS-No. 10102-17-7</b>
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EU. REACH, Annex XVII, : ; The substance/mixture does not fall under this legislation.  
Marketing and Use  
Restrictions (Regulation  
1907/2006/EC)

EU. Regulation No : EC Number: , 231-867-5; Listed  
1451/2007 [Biocides],  
Annex I, OJ (L 325)

EU. Directive : ; The substance/mixture does not fall under this legislation.  
2012/18/EU (SEVESO)

## SODIUM THIOSULPHATE PENTAHYDRATE (CHLORINE REDUCER)

III) Annex I

WGK (DE) : WGK 1: slightly hazardous to water: 386

### 15.2. Chemical safety assessment

no data available

## SECTION 16: Other information

### Abbreviations and Acronyms

<b>BCF</b>	bioconcentration factor
<b>BOD</b>	biochemical oxygen demand
<b>CAS</b>	Chemical Abstracts Service
<b>CLP</b>	Classification, Labelling and Packaging
<b>CMR</b>	carcinogenic, mutagenic or toxic to reproduction
<b>COD</b>	chemical oxygen demand
<b>DNEL</b>	derived no-effect level
<b>EINECS</b>	European Inventory of Existing Commercial Chemical Substances
<b>ELINCS</b>	European List of Notified Chemical Substances
<b>GHS</b>	Globally Harmonized System of Classification and Labelling of Chemicals
<b>LC50</b>	median lethal concentration
<b>LOAEC</b>	lowest observed adverse effect concentration
<b>LOAEL</b>	lowest observed adverse effect level
<b>LOEL</b>	lowest observed effect level
<b>NLP</b>	no-longer polymer
<b>NOAEC</b>	no observed adverse effect concentration
<b>NOAEL</b>	no observed adverse effect level
<b>NOEC</b>	no observed effect concentration
<b>NOEL</b>	no observed effect level
<b>OECD</b>	Organisation for Economic Cooperation and Development
<b>OEL</b>	occupational exposure limit
<b>PBT</b>	persistent, bioaccumulative and toxic
<b>PNEC</b>	predicted no-effect concentration
<b>STOT</b>	specific target organ toxicity
<b>SVHC</b>	substance of very high concern
<b>UVCB</b>	substance of unknown or variable composition, complex reaction products or biological materials

**SODIUM THIOSULPHATE PENTAHYDRATE (CHLORINE REDUCER)****vPvB**

very persistent and very bioaccumulative

**Further information**

Key literature references and sources for data : Supplier information and data from the "Database of registered substances" of the European Chemicals Agency (ECHA) were used to create this safety data sheet.

Methods used for product classification : The classification for human health, physical and chemical hazards and environmental hazards were derived from a combination of calculation methods and if available test data.

Hints for trainings : The workers have to be trained regularly on the safe handling of the products based on the information provided in the Safety Data Sheet and the local conditions of the workplace. National regulations for the training of workers in the handling of hazardous materials must be adhered to.

Other information : The information provided in this Safety Data Sheet is correct to our knowledge at the date of its revision. The information given only describes the products with regard to safety arrangements and is not to be considered as a warranty or quality specification and does not constitute a legal relationship.

The information contained in this Safety Data Sheet relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

|| Indicates updated section.