

## 1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND OF THE COMPANY / UNDERTAKING

**Product identifier:** Hydrosulphite

**Relevant identified uses of the substance or mixture and uses advised against:**

**Relevant identified uses:** Auxiliary / finishing agent for the textile industry.

**Recommended use:** Reducing agents, Bleaching agents, for industrial use only, inorganic reducing agents.

For the detailed identified uses of the product see appendix of the safety data sheet.

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## 2. HAZARDS IDENTIFICATION

**Classification of the substance or mixture:**

**According to Regulation (EC) No 1272/2008 [CLP]:**

Self-heat. 1  
Acute Tox. 4 (oral)  
Eye Dam./Irrit. 2  
H251, H302, H319

For the classifications not written out in full in this section the full text can be found in section 16.

**Label elements:** Globally Harmonized System, EU (GHS)

**Pictogram:**



**Signal Word:** Danger

**Hazard statement:**

**H251:** Self-heating: may catch fire.

**H302:** Harmful if swallowed.

**H319:** Causes serious eye irritation.

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#### Precautionary Statements (Prevention):

- P280:** Wear protective gloves and eye/face protection.
- P220:** Keep/store away from clothing/combustible materials.
- P235 + P410:** Keep cool. Protect from sunlight.
- P264:** Wash with plenty of water and soap thoroughly after handling.
- P270:** Do not eat, drink or smoke when using this product.

#### Precautionary Statements (Response):

- P312:** Call a POISON CENTER or doctor/physician if you feel unwell.
- P305 + P351 + P338:** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P301 + P330:** IF SWALLOWED: Rinse mouth.
- P337 + P311:** If eye irritation persists: Call a POISON CENTRE or doctor/physician.

#### Precautionary Statements (Storage):

- P407:** Maintain air gap between stacks/pallets.
- P420:** Store away from other materials.
- P413:** Store bulk masses greater than 1kg/ 2,2lbs at temperatures not exceeding 50°C/ 122°F.

#### Precautionary Statements (Disposal):

##### Labelling of special preparations (GHS):

**EUH031:** Contact with acids liberates toxic gas.

**According to Regulation (EC) No 1272/2008 [CLP]:**

**Hazard determining component(s) for labelling:** SODIUM DITHIONITE / SODIUM HYDROSULPHITE

#### Other hazards:

**According to Regulation (EC) No 1272/2008 [CLP]:**

No specific dangers known, if the regulations/notes for storage and handling are considered. If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture.

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

**Substances:** Not applicable

#### Mixtures:

**Chemical nature:** Sodium dithionite; Sodium hydrosulphite, stabilizing agents.  
Na<sub>2</sub>S<sub>2</sub>O<sub>4</sub>

[cont...]

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## Hazardous ingredients (GHS):

According to Regulation (EC) No. 1272/2008:

### Sodium Dithionite; Sodium hydrosulphite:

Content (w/w):	>=88%	Self-heat. 1
CAS Number:	7775-14-6	Acute Tox. 4 (oral)
EC Number:	231-890-0	Eye Dam./Irrit. 2
REACH registration number:	01-2119520510-57	EUH031
Index number:	016-028-00-1	

### Sodium Carbonate:

Content (w/w):	>=1% - <=3%	Eye Dam./Irrit. 2
CAS Number:	497-19-8	H319
EC Number:	207-838-8	
REACH registration number:	01-2119485498-19	
Index number:	011-005-00-2	

For the classifications not written out in full in this section, including the hazard classes and the hazard statements, the full text is listed in section 16.

## 4. FIRST AID MEASURES

### Description of first aid measures:

	Remove contaminated clothing.
If inhaled:	After inhalation of decomposition products, remove the affected person to a source of fresh air and keep calm. Provide medical aid.
On skin contact:	Wash thoroughly with soap and water.
On contact with eyes:	Immediately wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.
On ingestion:	Rinse mouth immediately and then drink plenty of water, seek medical attention.

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

Symptoms:	Skin irritation, irritates the eyes and respiratory tract, allergic symptoms
Hazards:	Respiratory sensitization may result in allergic (asthma-like) signs in the lower respiratory tract including wheezing, shortness of breath and difficulty breathing, the onset of which may be delayed.

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

Treatment:	Treat
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## 5. FIRE-FIGHTING MEASURES

### Extinguishing media:

Suitable extinguishing media: Water in copious quantities.

Unsuitable extinguishing media for safety reasons: Water spray.

[cont...]

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**Additional information:** Self inflammation possible by spray waters or water in small quantities.

**Special hazards arising from the substance or mixture:**

Sulphur dioxide.

The substances/groups of substances mentioned can be released in case of fire.

**Advice for fire-fighters:**

**Special protective equipment:** Wear a self-contained breathing apparatus.

**Further information:** Contaminated extinguishing water must be disposed of in accordance with official regulations.

### 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures:**

Avoid contact with the skin, eyes and clothing. Use breathing apparatus if exposed to vapours/dust/aerosol.

**Environmental precautions:** Do not discharge into drains/surface waters/groundwater. Do not discharge into the subsoil/soil. Retain and dispose of contaminated wash water.

**Methods and material for containment and cleaning up:**

**For small amounts:** Pick up in dry form. Dispose of absorbed material in accordance with regulations.

**For large amounts:** Pick up in dry form. Dispose of absorbed material in accordance with regulations.

**Reference to other sections:** Information regarding exposure controls/personal protection and disposal considerations can be found in section 8 and 13.

### 7. HANDLING AND STORAGE

**Precautions for safe handling:** Ensure thorough ventilation of stores and work areas. Breathing must be protected when large quantities are decanted without local exhaust ventilation. Do not open warm or swollen product containers. Remove persons to safety and alert fire brigade.

Protection against fire and explosion:

The product is liable to self-heating but not explosive.

**Conditions for safe storage, including any incompatibilities:**

Segregate from acids. Segregate from oxidants.

**Further information on storage conditions:** Protect against moisture. Containers should be stored tightly sealed in a dry place. Keep away from heat.

**Storage stability:** Large quantities of the product should not be kept in stockrooms with sprinkler installations due to a possible self-inflammation by small quantities of water.

Improper storage may result in a pressure build-up in the storage containers.

The packed product is not damaged by low temperatures or by frost.

**Protect from temperatures above:** 50 °C.

The packed product must be protected against exceeding the indicated temperature.

**Specific end use(s):** See exposure scenario(s) in the attachment to this safety data sheet.

[cont...]

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION****Control parameters****Components with occupational exposure limits:**

The mentioned substance is result of gradual decomposition under influence of atmospheric humidity.

7446-09-5: Sulphur dioxide.

**Components with PNEC:**

7775-14-6: Sodium dithionite; Sodium hydrosulphite

<b>Freshwater:</b>	1 mg/l
<b>Marine water:</b>	0.1 mg/l
<b>Sediment (freshwater):</b>	Exposure of sediment is not expected
<b>Sediment (marine water):</b>	Exposure of sediment is not expected
<b>STP:</b>	45.3 mg/l

**DNEL:**

**Inhalation:** The nuisance dust limit (inhalative fraction) was used as basis for the DNEL.

**Exposure controls:****Personal protective equipment:**

**Respiratory equipment:** Breathing protection if dusts are formed. Breathing protection if gases/vapours are formed. Combination filter for gases/vapours of organic, inorganic, acid inorganic and alkaline compounds (e.g. EN 14387 Type ABEK). Self-contained breathing apparatus.

**Hand protection:** Chemical resistant protective gloves (EN 374)  
Suitable materials also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN 374):  
polyvinylchloride (PVC) - 0.7 mm coating thickness  
butyl rubber (butyl) - 0.7 mm coating thickness  
nitrile rubber (NBR) - 0.4 mm coating thickness

**Supplementary note:** The specifications are based on tests, literature data and information of glove manufacturers or are derived from similar substances by analogy. Due to many conditions (e.g. temperature) it must be considered that the practical usage of a chemical-protective glove in practice may be much shorter than the permeation time determined through testing.  
Manufacturer's directions for use should be observed because of great diversity of types.

**Eye protection:** Safety glasses with side-shields (frame goggles) (e.g. EN 166)

**Body protection:** Body protection must be chosen depending on activity and possible exposure, e.g. apron, protecting boots, chemical-protection suit (according to EN 14605 in case of splashes or EN ISO 13982 in case of dust).

**General safety and hygiene measures:** Avoid contact with the skin, eyes and clothing. Do not breathe dust. Wearing of closed work clothing is recommended. Handle in accordance with good industrial hygiene and safety practice. When using, do not eat, drink or smoke.

[cont...]

**9. PHYSICAL AND CHEMICAL PROPERTIES****Information on basic physical and chemical properties:**

<b>Form:</b>	Powder
<b>Colour:</b>	White
<b>Odour:</b>	Pungent odour
<b>Odour threshold:</b>	Not determined due to potential health hazard by inhalation.
<b>pH value:</b>	8 – 10.5 (50g/l, 20°C)
<b>Decomposition point:</b>	>80°C Thermal decomposition above the indicated temperature is possible.
<b>Boiling point:</b>	The substance/product decomposes therefore not determined.
<b>Flash point:</b>	Not applicable.
<b>Evaporation rate:</b>	The product is a non-volatile solid.
<b>Flammability:</b>	Risk of spontaneous ignition.
<b>Flammability of Aerosol products:</b>	Not applicable, the product does not form flammable aerosols.
<b>Lower explosion limit:</b>	For solids not relevant for classification and labelling.
<b>Upper explosion limit:</b>	For solids not relevant for classification and labelling.
<b>Vapour pressure:</b>	The substance/ product decomposes therefore not determined.
<b>Relative vapour density (air):</b>	The product is a non-volatile solid.
<b>Solubility in water:</b>	Slow decomposition >150g/l (20°C)
<b>Partitioning coefficient n-octanol/water (log Kow):</b>	Not applicable
<b>Self-ignition:</b>	Temperature: >80°C
<b>Thermal decomposition:</b>	80°C. Thermal decomposition above the indicated temperature is possible.
<b>Viscosity, dynamic:</b>	Not applicable.
<b>Viscosity, kinematic:</b>	Not applicable, the product is a solid.
<b>Other information:</b>	
<b>Self-heating ability:</b>	It is a substance capable of spontaneous heating.
<b>Bulk density:</b>	1,150 – 1,300kg/m <sup>3</sup>
<b>pKA:</b>	Not applicable, study scientifically not justified/
<b>Hygroscopy:</b>	Non-hygroscopic
<b>Surface tension:</b>	Based on chemical structure, surface activity is not to be expected.

**10. STABILITY AND REACTIVITY**

<b>Reactivity:</b>	No hazardous reactions if stored and handled as prescribed/indicated.
<b>Corrosion to metals:</b>	Corrosive effects to metal are not anticipated.
<b>Chemical stability:</b>	The product is stable if stored and handled as prescribed/indicated.

**Possibility of hazardous reactions:** Reacts with acids. Reacts with oxidizing agents. Reacts with damp air. Self-inflammation possible by spray waters or water in small quantities. On contact with water, gaseous decomposition products are formed, which cause build-up of pressure in tightly closed containers.

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**Conditions to avoid:** > 80 °C  
Avoid humidity.

**Incompatible materials:**

**Substances to avoid:** Acids, oxidizing agents.

**Hazardous decomposition products:** Sulphur dioxide

### 11. TOXICOLOGICAL INFORMATION

**Information on toxicological effects:**

**Acute toxicity:**

**Assessment of acute toxicity:** Of moderate toxicity after single ingestion. Virtually nontoxic by inhalation. Virtually nontoxic after a single skin contact. The product has not been fully tested. The statements have been derived in parts from products of a similar structure or composition.

**Experimental/calculated data:**

**LD50 rat (oral):** approx. 2,500 mg/kg (BASF-Test)  
The European Union (EU) has classified this substance as 'harmful'.

**LC50 rat (by inhalation):** > 5.5 mg/l 4 h (OECD Guideline 403)  
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

**LD50 rat (dermal):** > 2,000 mg/kg (OECD Guideline 402)  
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

**Irritation:**

**Assessment of irritating effects:** Not irritating to the skin. Eye contact causes irritation.

**Experimental/calculated data:**

**Skin corrosion/irritation rabbit:** Slightly irritating. (BASF-Test)

**Serious eye damage/irritation rabbit:** Irritant. (OECD Guideline 405)

**Respiratory/Skin sensitization:**

**Assessment of sensitization:** Skin sensitizing effects were not observed in animal studies. A sensitizing effect on particularly sensitive individuals cannot be excluded.

**Experimental/calculated data:**

**Mouse Local Lymph Node Assay (LLNA) mouse:** Non-sensitizing. (OECD Guideline 429)

**Germ cell mutagenicity:**

**Assessment of mutagenicity:** Most of the results from the available studies show no evidence of a mutagenic effect. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

[cont...]

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### Carcinogenicity:

**Assessment of carcinogenicity:** In long-term studies in rats in which the substance was given by feed, a carcinogenic effect was not observed. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

### Reproductive toxicity:

**Assessment of reproduction toxicity:** The results of animal studies gave no indication of a fertility impairing effect. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

### Developmental toxicity:

**Assessment of teratogenicity:** No indications of a developmental toxic / teratogenic effect were seen in animal studies. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

### Specific target organ toxicity (single exposure):

**Assessment of STOT single:** Based on the available information there is no specific target organ toxicity to be expected after a single exposure.

### Repeated dose toxicity and Specific target organ toxicity (repeated exposure):

**Assessment of repeated dose toxicity:** Repeated oral uptake of the substance did not cause substance-related effects.

**Aspiration hazard:** not applicable

## 12. ECOLOGICAL INFORMATION

### Toxicity:

**Assessment of aquatic toxicity:** Acutely harmful for aquatic organisms. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.

**Toxicity to fish:** LC50 (96 h) 62.3 mg/l, *Leuciscus idus* (DIN 38412 Part 15, static)  
Nominal concentration.

**Aquatic invertebrates:** EC50 (48 h) 98.3 mg/l, *Daphnia magna* (Directive 79/831/EEC, static)  
Nominal concentration.

**Aquatic plants:** EC50 (72 h) 206 mg/l (growth rate), *Scenedesmus subspicatus* (DIN 38412 Part 9, static)  
Nominal concentration.

**Microorganisms/Effect on activated sludge:** EC20 (3 h) 120.5 mg/l, (OECD Guideline 209, aquatic)

**Chronic toxicity to fish:** No observed effect concentration (34 d)  $\geq$  316 mg/l, *Brachydanio rerio* (OECD Guideline 210, Flow through.)  
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

[cont...]



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**Chronic toxicity to aquatic invertebrates:** No observed effect concentration (21 d) > 10 mg/l, *Daphnia magna* (semistatic)  
Nominal concentration.

**Assessment of terrestrial toxicity:** Study scientifically not justified.

**Persistence and degradability:**

**Assessment biodegradation and elimination (H<sub>2</sub>O):**

Inorganic product which cannot be eliminated from water by biological purification processes.

Study scientifically not justified.

**Assessment of stability in water:** In contact with water the substance will hydrolyse rapidly.

**Information on Stability in Water (Hydrolysis):** t<sub>1/2</sub> 1.5 h (50 °C, pH value 8.5), (Directive 84/449/EEC, C.10)

**Bioaccumulative potential:**

**Assessment bioaccumulation potential:** Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is not to be expected.

**Bioaccumulation potential:** Study scientifically not justified.

**Mobility in soil:**

**Assessment transport between environmental compartments:**

**Adsorption in soil:** Adsorption to solid soil phase is not expected.

**Results of PBT and vPvB assessment:** According to Annex XIII of Regulation (EC) No.1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH): The product does not fulfil the criteria for PBT (Persistent/ bioaccumulative/toxic) and vPvB (very persistent/ very bioaccumulative). Self-classification.

**Other adverse effects:** The substance is not listed in Regulation (EC) 1005/2009 on substances that deplete the ozone layer.

**Additional information:**

**Sum parameter:**

**Chemical oxygen demand (COD):** approx. 210 mg/g

**Adsorbable organically bound halogen (AOX):** This product contains no organically bound halogen.

**Other ecotoxicological advice:** Do not allow to enter soil, waterways or wastewater channels. Higher concentrations of the substance may cause a strong chemical oxygen consumption in biological sewage-treatment plants and/or waterways.

## 13. DISPOSAL CONSIDERATIONS

**Waste treatment methods:** Must be disposed of or incinerated in accordance with local regulations.  
The UK Environmental Protection (Duty of Care) Regulations (EP) and amendments should be noted (United Kingdom).  
This product and any uncleaned containers must be disposed of as hazardous waste in accordance with the 2005 Hazardous Waste Regulations and amendments (United Kingdom)

[cont...]

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**Contaminated packaging:** Uncontaminated packaging can be re-used.  
Packs that cannot be cleaned should be disposed of in the same manner as the contents.

### 14. TRANSPORT INFORMATION

#### Land transport:

##### ADR:

**UN number:** UN1384  
**UN proper shipping name:** Sodium Dithionite (Sodium Hydrosulphite)  
**Transport hazard class(es):** 4.2  
**Packing group:** II  
**Environmental hazards:** no  
**Tunnel code:** D/E  
**Special precautions for user:** Protect from wetness

##### RID:

**UN number:** UN1384  
**UN proper shipping name:** Sodium Dithionite (Sodium Hydrosulphite)  
**Transport hazard class(es):** 4.2  
**Packing group:** II  
**Environmental hazards:** no  
**Special precautions for user:** Protect from wetness

#### Inland waterway transport:

##### ADN:

**UN number:** UN1384  
**UN proper shipping name:** Sodium Dithionite (Sodium Hydrosulphite)  
**Transport hazard class(es):** 4.2  
**Packing group:** II  
**Environmental hazards:** no  
**Special precautions for user:** Protect from wetness

**Transport in inland waterway vessel:** Not evaluated.

#### Sea transport:

##### IMDG:

**UN number:** UN1384  
**UN proper shipping name:** Sodium Dithionite (Sodium Hydrosulphite)  
**Transport hazard class(es):** 4.2  
**Packing group:** II  
**Environmental hazards:** no  
**Marine pollutant:** no  
**Special precautions for user:** Protect from wetness

[cont...]

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### Air transport:

#### IATA/ICAO:

**UN number:** UN1384  
**UN proper shipping name:** Sodium Dithionite (Sodium Hydrosulphite)  
**Transport hazard class(es):** 4.2  
**Packing group:** II  
**Environmental hazards:** No, mark as dangerous for the environment is needed  
**Special precautions for user:** Protect from wetness

**ADR Tunnel Code:** D/E

**UN Number:** See corresponding entries for "UN number" for the respective regulations in the tables above.

**UN proper shipping name:** See corresponding entries for "UN proper shipping name" for the respective regulations in the tables above.

**Transport hazard class(es):** See corresponding entries for "Transport hazard class(es)" for the respective regulations in the tables above.

**Packing group:** See corresponding entries for "Packing group" for the respective regulations in the tables above.

**Environmental hazards:** See corresponding entries for "Environmental hazards" for the respective regulations in the tables above.

**Special precautions for user:** See corresponding entries for "Special precautions for user" for the respective regulations in the tables above.

### Transport in bulk according to Annex II of MARPOL and the IBC Code:

**Regulation:** Not evaluated.  
**Shipment approved:** Not evaluated.  
**Pollution name:** Not evaluated.  
**Pollution category:** Not evaluated.  
**Ship type:** Not evaluated.

**Further information:** Specific national features of transport regulations must be observed. They are to be found in the shipping documents.  
This product is subject to the most recent edition of "The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations" and their amendments (United Kingdom).

[cont...]

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### 15. REGULATORY INFORMATION

**Chemical Safety Assessment:** Chemical Safety Assessment performed.

**Note:** The regulatory information given above only indicates the principal regulations specifically applicable to the product described in the safety data sheet. The user's attention is drawn to the possible existence of additional provisions which complete these regulations. Refer to all applicable national, international and local regulations or provisions.

### 16. OTHER INFORMATION

**Assessment of the hazard classes according to UN GHS criteria (most recent version):**

Aquatic Acute 3  
Skin Corr./Irrit. 3  
Eye Dam./Irrit. 2A  
Self-heat. 1  
Acute Tox. 5 (oral)

**Full text of the classifications, including the hazard classes and the hazard statements, if mentioned in section 2 or 3:**

**Self-heat:** Self-heating substances and mixtures.  
**Acute Tox.:** Acute toxicity.  
**Eye Dam./ Irrit.:** Serious eye damage/ eye irritation.  
**H251:** Self-heating: May catch fire.  
**H302:** Harmful if swallowed.  
**H319:** Causes serious eye irritation.  
**EUH031:** Contact with acids liberates toxic gas.

**Legal disclaimer:** The information contained in this SDS does not constitute a risk assessment, and should not replace the user's own assessment of risks as required by other health and safety legislation. This advice is given by Nexchem Ltd who accept no legal liability for it except otherwise provided by law. The information contained herein is based on the present state of our knowledge and is intended to describe our products from the point of view of safety requirements. It should not therefore be construed as guaranteeing specific properties.