



Be Right™

SAFETY DATA SHEET

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

Issue Date 17-Jan-2007

Revision Date 14-Feb-2023

Version 2.9

Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

| | |
|------------------|-------------------------------------------------------------|
| Product Code(s) | 46001 |
| Product Name | Sodium Thiosulfate, Pentahydrate |
| Synonyms | No information available |
| CAS No | 10102-17-7 |
| Formula | $\text{Na}_2\text{S}_2\text{O}_3 \cdot 5\text{H}_2\text{O}$ |
| Molecular weight | 248.18 |

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

| | |
|----------------------|-----------------|
| Recommended Use | Laboratory Use. |
| Uses advised against | Consumer use |

1.3. Details of the supplier of the safety data sheet

Supplier

HACH UK
Laser House
Ground Floor, Suite B
Waterfront Quay, Salford Quays
GB - Manchester, M50 3XW
Tel. +44 (0) 161 872 1487
info-uk@hach.com

HACH Ireland
Unit 34 GB Business Park
Little Island
IRL-Co. Cork
T45 H681
Tel. +353 (0)146 02 522
info-ie@hach.com

1.4. Emergency telephone number

UK: Poison Control Center Mainz: Tel: +49 (0) 6131 19240 - 24 hour emergency service
IE: National Poisons Information Centre (NPIC) 01 809 2566 (24/7)

Section 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [CLP]

2.2. Label elements

CAS No 10102-17-7

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [CLP]

Hazard statements

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [CLP]

2.3. Other hazards

PBT & vPvB

This substance does not meet the PBT/vPvB criteria of REACH, annex XIII

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

| Chemical name | CAS No. EC No. Index No. | Weight-% | Classification according to Regulation (EC) No. 1272/2008 [CLP] | Specific concentration limit (SCL) | M-Factor | M-Factor (long-term) |
|------------------------------------------------------------------------------------------------------|--------------------------------|----------|--------------------------------------------------------------------------|------------------------------------------|----------|-------------------------|
| Thiosulfuric acid (H ₂ S ₂ O ₃), disodium salt, pentahydrate | 10102-17-7 - - | 100% | Not classified | - | - | - |

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

Acute Toxicity Estimate No information available

Section 4: FIRST AID MEASURES

4.1. Description of first aid measures

| | |
|-------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| General advice | Show this safety data sheet to the doctor in attendance. |
| Inhalation | Remove to fresh air. |
| Eye contact | Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a doctor. |
| Skin contact | Wash skin with soap and water. In the case of skin irritation or allergic reactions see a doctor. |
| Ingestion | Clean mouth with water. Get medical attention if symptoms occur. |
| Self-protection of the first aider | Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8). |

Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

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

Symptoms No information available.

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

Note to doctors Treat symptomatically.

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 No information available.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical Thermal decomposition can lead to release of irritating and toxic gases and vapours.

Hazardous combustion products Sulphur oxides. Sodium oxides. Carbon oxides.

5.3. Advice for firefighters

Special protective equipment and precautions for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

Additional information Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Section 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Evacuate personnel to safe areas.

For emergency responders Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions Should not be released into the environment. See Section 12 for additional Ecological Information.

6.3. Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Avoid creating dust. Take up mechanically, placing in appropriate containers for disposal.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Reference to other sections See section 8 for more information. See section 13 for more information.

Section 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Advice on safe handling Ensure adequate ventilation. Avoid breathing dust/fume/gas/mist/vapours/spray.

General hygiene considerations Avoid creating dust.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed in a dry and well-ventilated place.

7.3. Specific end use(s)

Specific use(s) Analytical reagent.

Risk Management Methods (RMM) The information required is contained in this Safety Data Sheet.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Exposure Limits This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

Derived No Effect Level (DNEL) No information available.

Predicted No Effect Concentration (PNEC) No information available.

Additional information No information available.

8.2. Exposure controls

Engineering controls Technical measures and appropriate working operations should be given priority over the use of personal protective equipment. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Personal protective equipment
Eye/face protection** Wear safety glasses with side shields (or goggles).

Hand protection Barrier creams may help to protect the exposed areas of skin. Wear suitable gloves. Gloves must be inspected prior to use. The selected protective gloves have to satisfy the specifications of EU Directive 2016/425 and the standard EN 374-1:2016 derived from it. Chemical resistant gloves made of butyl rubber or nitrile rubber category III acco.

Skin and body protection Avoid contact with eyes, skin and clothing. Wash contaminated clothing before reuse. Long sleeved clothing.

Respiratory protection Ensure adequate ventilation. No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required. Wear breathing apparatus if exposed to

vapours/dusts/aerosols.

General hygiene considerations Avoid creating dust.**Environmental exposure controls** Do not allow into any sewer, on the ground or into any body of water.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical state Solid**Colour** colourless**Odour** Odourless**Odour threshold** Not applicable

| <u>Property</u> | <u>Values</u> | <u>Remarks • Method</u> |
|--------------------------------------------------------|------------------------|-------------------------|
| Molecular weight | 248.18 | |
| pH | No data available | |
| Melting point / freezing point | No data available | |
| Initial boiling point and boiling range | No data available | |
| Evaporation rate | Not applicable | |
| Vapour pressure | Not applicable | |
| Relative vapor density | No data available | |
| Specific Gravity | 1.74 | |
| Partition coefficient | No data available | |
| Soil Organic Carbon-Water Partition Coefficient | No data available | |
| Autoignition temperature | No data available | |
| Decomposition temperature | No data available | |
| Dynamic viscosity | Not applicable | |
| Kinematic viscosity | Not applicable | |
| Relative density | 1.74 g/cm ³ | @ 20 °C |

Solubility(ies)

Water solubility

| <u>Water solubility classification</u> | <u>Water solubility</u> | <u>Water Solubility Temperature</u> |
|----------------------------------------|-------------------------|-------------------------------------|
| Completely soluble | 701000 mg/L | 20 °C / 68 °F |

Solubility in other solvents

| <u>Chemical Name</u> | <u>Solubility classification</u> | <u>Solubility</u> | <u>Solubility Temperature</u> |
|----------------------|----------------------------------|-------------------|-------------------------------|
| None reported | No information available | No data available | No information available |

Metal Corrosivity

| | |
|-------------------------|-------------------|
| Steel Corrosion Rate | No data available |
| Aluminum Corrosion Rate | No data available |

Explosive properties

| | |
|-----------------------|-------------------|
| Upper explosion limit | No data available |
| Lower explosion limit | No data available |

Flammable properties

| | |
|-------------|----------------|
| Flash point | Not applicable |
|-------------|----------------|

Flammability

| | |
|---------------------------|-------------------|
| Upper flammability limit: | No data available |
| Lower flammability limit | No data available |

| | |
|----------------------|--------------------|
| Oxidising properties | No data available. |
|----------------------|--------------------|

| | |
|--------------|-------------------|
| Bulk density | No data available |
|--------------|-------------------|

9.2. Other information

No information available.

Section 10: STABILITY AND REACTIVITY**10.1. Reactivity**

| | |
|------------|---------------------------|
| Reactivity | No information available. |
|------------|---------------------------|

10.2. Chemical stability

| | |
|-----------|---------------------------------|
| Stability | Stable under normal conditions. |
|-----------|---------------------------------|

10.3. Possibility of hazardous reactions

| | |
|------------------------------------|-------------------------------|
| Possibility of hazardous reactions | None under normal processing. |
|------------------------------------|-------------------------------|

| | |
|--------------------------|------------------------------------------|
| Hazardous polymerisation | Hazardous polymerisation does not occur. |
|--------------------------|------------------------------------------|

10.4. Conditions to avoid

| | |
|---------------------|-------------------------------------------|
| Conditions to avoid | None known based on information supplied. |
|---------------------|-------------------------------------------|

10.5. Incompatible materials

| | |
|------------------------|------------------|
| Incompatible materials | Oxidising agent. |
|------------------------|------------------|

10.6. Hazardous decomposition products

| | |
|----------------------------------|-------------------------------------------------------------|
| Hazardous Decomposition Products | Toxic fumes of sulfur oxides. Sodium oxides. Carbon oxides. |
|----------------------------------|-------------------------------------------------------------|

Section 11: TOXICOLOGICAL INFORMATION**11.1. Information on toxicological effects**

Acute toxicity

Based on available data, the classification criteria are not met

Mixture If available, see ingredient data below.

Substance No data available.

Acute Toxicity Estimate (ATE)

Not applicable

Skin corrosion/irritation

Based on available data, the classification criteria are not met.

Mixture If available, see ingredient data below.

Substance Test data reported below.

| Chemical name | Test method | Species | Reported dose | Exposure time | Results | Key literature references and sources for data |
|------------------------------------------------------------------------------------------------|--------------------------------------------------|---------|---------------|---------------|-------------------------------------|------------------------------------------------|
| Thiosulfuric acid (H ₂ S ₂ O ₃), disodium salt, pentahydrate | OECD Test 404: Acute Dermal Corrosion/Irritation | Rabbit | 500 mg | 4 hours | Not corrosive or irritating to skin | ECHA |

Serious eye damage/eye irritation

Based on available data, the classification criteria are not met.

Mixture If available, see ingredient data below.

Substance Test data reported below.

| Chemical name | Test method | Species | Reported dose | Exposure time | Results | Key literature references and sources for data |
|------------------------------------------------------------------------------------------------|-----------------------------------------------|---------|---------------|---------------|-------------------------------------|------------------------------------------------|
| Thiosulfuric acid (H ₂ S ₂ O ₃), disodium salt, pentahydrate | OECD Test 405: Acute Eye Corrosion/Irritation | Rabbit | 75 mg | None reported | Not corrosive or irritating to eyes | ECHA |

Respiratory or skin sensitisation

Based on available data, the classification criteria are not met.

Mixture If available, see ingredient data below.

Substance No data available.

STOT - single exposure

Based on available data, the classification criteria are not met.

Mixture If available, see ingredient data below.

Substance No data available.

STOT - repeated exposure

Based on available data, the classification criteria are not met.

Mixture If available, see ingredient data below.

Substance No data available.

Germ cell mutagenicity

Based on available data, the classification criteria are not met.

Mixture invitro **Data** If available, see ingredient data below.

Substance invitro **Data** No data available.

Mixture invivo **Data** If available, see ingredient data below.

Substance invivo **Data** No data available.

Carcinogenicity

Based on available data, the classification criteria are not met.

Mixture If available, see ingredient data below.

Substance No data available.

Reproductive toxicity

Based on available data, the classification criteria are not met.

Mixture No data available.

Substance No data available.

Aspiration hazard

Based on available data, the classification criteria are not met.

11.2 Information on other hazards

Other dangerous properties can not be excluded. Handle in accordance with good industrial hygiene and safety practice.

11.2.1. Endocrine disrupting properties

Endocrine disrupting properties No information available.

11.2.2. Other information

Other adverse effects No information available.

Section 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecotoxicity Based on available data, the classification criteria are not met.

Mixture

Acute aquatic toxicity: If available, see ingredient data below.

Aquatic Chronic Toxicity: If available, see ingredient data below.

Substance

Acute aquatic toxicity: No data available.

Fish:

| Chemical name | Exposure time | Species | Endpoint type | Reported dose | Key literature references and sources for data |
|------------------------------------------------------------------------------------------------|---------------|-------------------------|------------------|---------------|------------------------------------------------|
| Thiosulfuric acid (H ₂ S ₂ O ₃), disodium salt, pentahydrate | 96 hours | <i>Gambusia affinis</i> | LC ₅₀ | 24000 mg/L | IUCLID |

Aquatic Chronic Toxicity: No data available.

12.2. Persistence and degradability

Mixture No data available.

12.3. Bioaccumulative potential

Mixture: No data available.

Partition coefficient No data available

12.4. Mobility in soil

Soil Organic Carbon-Water Partition Coefficient No data available

12.5. Results of PBT and vPvB assessment

The components in this formulation do not meet the criteria for classification as PBT or vPvB.

12.6. Endocrine disrupting properties

Endocrine Disruptor Information: This product does not contain any known or suspected endocrine disruptors

12.7. Other adverse effects

No information available.

Ozone: Not applicable

Ozone depletion potential (ODP): No information available

Section 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Advice on Disposal

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Waste disposal number of waste from residues/unused products

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals; hazardous waste.

Waste disposal number of used product

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals; hazardous waste.

Contaminated packaging Dispose of contents/containers in accordance with local regulations.

Other Information Do not reuse empty containers.

Section 14: TRANSPORT INFORMATION

IMDG

| | |
|--------------------------------------------------------------------------|--------------------------------------|
| 14.1 UN number or ID number | Not regulated |
| 14.2 Proper shipping name | Not regulated |
| 14.3 Transport hazard class(es) | Not regulated |
| 14.4 Packing Group | Not regulated |
| 14.5 Marine pollutant | Not applicable |
| 14.6 Special precautions for user | See section 6-8 for more information |
| 14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code | Not applicable |

ADR

| | |
|-----------------------------------|--------------------------------------|
| 14.1 UN number or ID number | Not regulated |
| 14.2 Proper shipping name | Not regulated |
| 14.3 Transport hazard class(es) | Not regulated |
| 14.4 Packing Group | Not regulated |
| 14.5 Environmental hazards | Not applicable |
| 14.6 Special precautions for user | See section 6-8 for more information |

IATA

| | |
|-----------------------------------|--------------------------------------|
| | Not regulated |
| 14.1 UN number or ID number | Not regulated |
| 14.2 Proper shipping name | Not regulated |
| 14.3 Transport hazard class(es) | Not regulated |
| 14.4 Packing group | Not regulated |
| 14.5 Environmental hazards | Not applicable |
| 14.6 Special precautions for user | See section 6-8 for more information |

Additional information

There is a possibility that this product could be contained in a reagent set or kit composed of various compatible dangerous goods. If the item is not in a reagent set or kit, the classification given above applies.

If the item is part of a reagent set or kit the classification would change to the following:

UN3316 Chemical Kit, Hazard Class 9, Packing Group II or III.

If the item is not regulated, the Chemical Kit classification does not apply.

Section 15: REGULATORY INFORMATION

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

National regulations

European Union

Authorisations and/or restrictions on use:

This product does not contain substances subject to authorisation (Regulation (EC) No. 1907/2006 (REACH), Annex XIV) This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

Persistent Organic Pollutants Not applicable

Dangerous substance category per Seveso Directive (2012/18/EU)

- Non-controlled

Ozone-depleting substances (ODS) regulation (EC) 1005/2009

Not applicable

Germany**Water hazard class (WGK)** slightly hazardous to water (WGK 1)**France****Occupational Illnesses (R-463-3, France)**

| Chemical name | French RG number | Title |
|--------------------------------------------------------------------------------------------------------------|----------------------------------------|-------|
| Thiosulfuric acid (H ₂ S ₂ O ₃), disodium salt, pentahydrate 10102-17-7 | RG 5, RG 14, RG 15, RG 15bis, RG 20bis | - |

International Inventories

| | |
|-----------------------------------|-----------------|
| EINECS/ELINCS | Does not comply |
| TSCA | Complies |
| DSL/NDSL | Complies |
| ENCS | Complies |
| IECSC | Complies |
| KECL - Existing substances | Does not comply |
| PICCS | Complies |
| AICS | Complies |

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List**ENCS** - Japan Existing and New Chemical Substances**IECSC** - China Inventory of Existing Chemical Substances**KECL** - Korean Existing and Evaluated Chemical Substances**PICCS** - Philippines Inventory of Chemicals and Chemical Substances**AICS** - Australian Inventory of Chemical Substances**15.2. Chemical safety assessment****Chemical Safety Report** Chemical safety assessments for substances in this mixture were not carried out.**Section 16: OTHER INFORMATION**

| | |
|----------------------|----------------------------------------------|
| Issue Date | 17-Jan-2007 |
| Revision Date | 14-Feb-2023 |
| Revision Note | New SDS, SDS sections updated, 3, 9, 11, 12. |

Key or legend to abbreviations and acronyms used in the safety data sheet**Legend**

| | |
|-----|--------------------------------------------------------------------------------------------------------------------|
| ** | Hazard Designation |
| ADN | Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieure |
| ADR | European Agreement concerning the International Carriage of Dangerous Goods by Road |

| | |
|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ATE | Acute Toxicity Estimate |
| CAS | Chemical Abstracts Service Number |
| Ceiling | Maximum limit value |
| CLP | Classification, Labelling and Packaging of substances and mixtures [Regulation (EC) No. 1272/2008] |
| DNEL | Derived No Effect Level (DNEL) |
| EC | European Community |
| ECHA | ECHA (The European Chemicals Agency) |
| EC50 | Effective Concentration to 50% of a test population |
| EEC | European Economic Community |
| EN | European Standard |
| IMDG | International Maritime Dangerous Goods (IMDG) |
| IATA | International Air Transport Association (IATA) |
| IATA-DGR | International Air Transport Association - Dangerous Goods Regulations |
| ICAO | International Civil Aviation Organization |
| ICAO-TI | International Civil Aviation Organization - Technical Instructions |
| IUCLID | IUCLID (The International Uniform Chemical Information Database) |
| GHS | Globally Harmonized System of Classification and Labelling of Chemicals |
| LOAEL | Lowest observed adverse effect level |
| LOAEC | Lowest observed adverse effect concentration |
| LC50 | Lethal Concentration to 50% of a test population |
| LD50 | Lethal Dose to 50% of a test population (Median Lethal Dose) |
| LOLI | LOLI (List of Lists - An International Chemical Regulatory Database) |
| MAK | Maximale Arbeitsplatz-Konzentration, a German expression corresponding to threshold limit value, which relates to safe daily exposure levels to chemical substances |
| NOAEL | NOAEL (No observed adverse effect level) |
| NOAEC | No observed adverse effect concentration |
| OSHA | OSHA (Occupational Safety and Health Administration of the US Department of Labour) |
| PEC | Predicted Effect Concentration |
| PNEC | Predicted No Effect Concentration (PNEC) |
| PBT | Persistent, Bioaccumulative, and Toxic (PBT) Chemicals |
| REACH | Registration, Evaluation, Authorisation and Restriction of Chemicals [Regulation (EC) No. 1907/2006] |
| RID | Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail) |
| RTECS | RTECS (Registry of Toxic Effects of Chemical Substances) |
| TWA | TWA (time-weighted average) |
| SKN* | Skin designation |
| SKN+ | Skin sensitisation |
| STEL | STEL (Short Term Exposure Limit) |
| STOT | Specific Target Organ Toxicity |
| STOT RE | Specific target organ toxicity — repeated exposure |
| STOT SE | Specific target organ toxicity — single exposure |
| SVHC | Substances of Very High Concern |
| TLV | Threshold Limit Value |
| TRGS | Technical rules for hazardous substances, Germany |
| TSCA | Toxic Substances Control Act |
| UN | United Nations |
| vPvB | very persistent and very bioaccumulative |
| VOC | Volatile organic compounds |
| AwSV | Administrative regulation of water polluting substances, Germany |

Key literature references and sources for data

See Section 11: TOXICOLOGICAL INFORMATION

See Section 12: ECOLOGICAL INFORMATION

Classification procedure

| Classification according to Regulation (EC) No. 1272/2008 [CLP] | Method Used |
|-----------------------------------------------------------------|--------------------|
| Acute oral toxicity | Calculation method |
| Acute dermal toxicity | Calculation method |

| | |
|---------------------------------------|--------------------|
| Acute inhalation toxicity - gas | Calculation method |
| Acute inhalation toxicity - Vapour | Calculation method |
| Acute inhalation toxicity - dust/mist | Calculation method |
| Skin corrosion/irritation | Calculation method |
| Serious eye damage/eye irritation | Calculation method |
| Respiratory sensitisation | Calculation method |
| Skin sensitisation | Calculation method |
| Mutagenicity | Calculation method |
| Carcinogenicity | Calculation method |
| Reproductive toxicity | Calculation method |
| STOT - single exposure | Calculation method |
| STOT - repeated exposure | Calculation method |
| Acute aquatic toxicity | Calculation method |
| Chronic aquatic toxicity | Calculation method |
| Aspiration toxicity | Calculation method |
| Ozone | Calculation method |

Training Advice

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Restrictions on use

For Laboratory Use Only.

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

End of Safety Data Sheet