SAFETY DATA SHEET

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

1.1 Product identifiers

Product name: Sodium thiosulfate anhydrous EMPLURA®

Product Number: 1.06512
Catalogue No.: 106512
Brand: Millipore
CAS-No.: 7772-98-7

1.2 Other means of identification

No data available

1.3 Relevant identified uses of the substance or mixture and uses advised against

Identified uses: Materials for use in technical applications

1.4 Details of the supplier of the safety data sheet

Company: Sigma-Aldrich Pte Ltd
(Co. Registration No. 199403788W)
1 Science Park Road
#02-14 The Capricorn, S’pore Sci. PkII
SINGAPORE 117528
SINGAPORE

Telephone: +65 6779-1200
Fax: +65 6779-1822

1.5 Emergency telephone

Emergency Phone #: 1-800-262-8200

SECTION 2: Hazards identification

2.1 GHS Classification

Not a hazardous substance or mixture.

2.2 GHS Label elements, including precautionary statements

Not a hazardous substance or mixture.

2.3 Other hazards - none

SECTION 3: Composition/information on ingredients

3.1 Substances

Formula: Na2S2O3
Molecular weight: 158.10 g/mol
CAS-No.: 7772-98-7
 SECTION 4: First aid measures

4.1 Description of first-aid measures

If inhaled
After inhalation: fresh air.

In case of skin contact
In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/shower.

In case of eye contact
After eye contact: rinse out with plenty of water. Remove contact lenses.

If swallowed
After swallowing: make victim drink water (two glasses at most). Consult doctor if feeling unwell.

4.2 Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed
No data available

 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
For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture
Sulfur oxides
Sodium oxides
Not combustible.
Fire may cause evolution of:
Sulfur oxides
Ambient fire may liberate hazardous vapours.

5.3 Advice for firefighters
In the event of fire, wear self-contained breathing apparatus.

5.4 Further information
Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.
SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Advice for non-emergency personnel: Avoid inhalation of dusts. Evacuate the danger area, observe emergency procedures, consult an expert.
For personal protection see section 8.

6.2 Environmental precautions
Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up
Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

6.4 Reference to other sections
For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities
Storage conditions
Tightly closed. Dry.
Store at +5°C to +30°C.

7.3 Specific end use(s)
Apart from the uses mentioned in section 1.3 no other specific uses are stipulated.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters
Ingredients with workplace control parameters
Contains no substances with occupational exposure limit values.

8.2 Exposure controls
Appropriate engineering controls
Change contaminated clothing. Wash hands after working with substance.

Personal protective equipment
Eye/face protection
Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses

Skin protection
This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. 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).
Full contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested: KCL 741 Dermatril® L

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. 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).

Splash contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested: KCL 741 Dermatril® L

**Respiratory protection**
required when dusts are generated.
Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

**Control of environmental exposure**
Do not let product enter drains.

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**SECTION 9: Physical and chemical properties**

**9.1 Information on basic physical and chemical properties**

- **a) Appearance**
  - Form: solid
  - Color: colorless

- **b) Odor**
  - No data available

- **c) Odor Threshold**
  - No data available

- **d) pH**
  - 6.0 - 8.5 at 50 g/l at 20 °C

- **e) Melting point/freezing point**
  - Melting point/range: 48 °C

- **f) Initial boiling point and boiling range**
  - No data available

- **g) Flash point**
  - No data available

- **h) Evaporation rate**
  - No data available

- **i) Flammability (solid, gas)**
  - The product is not flammable.

- **j) Upper/lower flammability or explosive limits**
  - No data available

- **k) Vapor pressure**
  - No data available

- **l) Vapor density**
  - No data available

- **m) Relative density**
  - 1.667 g/cm³ at 20 °C

- **n) Water solubility**
  - 210 g/l at 20 °C
o) Partition coefficient: Not applicable for inorganic substances
   n-octanol/water
p) Autoignition temperature No data available
q) Decomposition temperature No data available
r) Viscosity Viscosity, kinematic: No data available
   Viscosity, dynamic: No data available
s) Explosive properties No data available
t) Oxidizing properties No data available

9.2 Other safety information
   Bulk density ca. 1,350 kg/m³

SECTION 10: Stability and reactivity
10.1 Reactivity
   No data available

10.2 Chemical stability
   The product is chemically stable under standard ambient conditions (room temperature).

10.3 Possibility of hazardous reactions
   No data available

10.4 Conditions to avoid
   no information available

10.5 Incompatible materials
   Strong oxidizing agents

10.6 Hazardous decomposition products
   In the event of fire: see section 5

SECTION 11: Toxicological information
11.1 Information on toxicological effects

   Acute toxicity
   LD50 Oral - Rat - female - > 2,000 mg/kg
   (OECD Test Guideline 425)
   Remarks:
   (in analogy to similar compounds)
   LC50 Inhalation - Rat - male and female - 4 h - > 2.6 mg/l
   (OECD Test Guideline 403)
   Remarks:
   (in analogy to similar products)
   The value is given in analogy to the following substances: potassium thiosulphate
   LD50 Dermal - Rabbit - male and female - > 2,000 mg/kg
   (OECD Test Guideline 402)
   The value is given in analogy to the following substances: potassium thiosulphate

   Skin corrosion/irritation
   Skin - Rabbit
   Result: No skin irritation - 4 h
(OECD Test Guideline 404)  
Remarks:  
(in analogy to similar products)  
The value is given in analogy to the following substances: sodium sulphite  

**Serious eye damage/eye irritation**  
Eyes - Rabbit  
Result: No eye irritation  
(OECD Test Guideline 405)  
Remarks:  
(in analogy to similar products)  
The value is given in analogy to the following substances: diammonium thiosulphate  

**Respiratory or skin sensitization**  
Local lymph node assay (LLNA) - Mouse  
Result: negative  
(OECD Test Guideline 429)  
Remarks:  
(in analogy to similar products)  
The value is given in analogy to the following substances: diammonium thiosulphate  

**Germ cell mutagenicity**  
In vitro mammalian cell gene mutation test  
mouse lymphoma cells  
Result: negative  
Remarks:  
(in analogy to similar products)  
The value is given in analogy to the following substances: diammonium thiosulphate  
Ames test  
Escherichia coli/Salmonella typhimurium  
Result: negative  
Remarks:  
(in analogy to similar products)  
The value is given in analogy to the following substances: diammonium thiosulphate  
Chromosome aberration test in vitro  
Chinese hamster ovary cells  
Result: negative  
Remarks:  
(in analogy to similar products)  
The value is given in analogy to the following substances: diammonium thiosulphate  

**Carcinogenicity**  
IARC: No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.  

**Reproductive toxicity**  
No data available  

**Specific target organ toxicity - single exposure**  
No data available  

**Specific target organ toxicity - repeated exposure**  
No data available  

**Aspiration hazard**  
No data available
11.2 Additional Information

Repeated dose toxicity - Rat - male and female - Oral - NOAEL (No observed adverse effect level) - 108 mg/kg
Remarks:
(in analogy to similar products)
(ECHA)
The value is given in analogy to the following substances: sodium metabisulphite

Not available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.
Hazardous properties cannot be excluded but are unlikely when the product is handled appropriately.
Therapeutically used substance.
Handle in accordance with good industrial hygiene and safety practice.

SECTION 12: Ecological information

12.1 Toxicity

Toxicity to fish
static test LC50 - Lepomis macrochirus (Bluegill sunfish) - 510 mg/l - 96 h
Remarks: (in analogy to similar products)
(ECHA)
The value is given in analogy to the following substances: diammonium thiosulphate

Toxicity to daphnia and other aquatic invertebrates
static test EC50 - Daphnia magna (Water flea) - 230 mg/l - 48 h
Remarks: (in analogy to similar products)
(ECHA)
The value is given in analogy to the following substances: diammonium thiosulphate

Toxicity to algae
static test ErC50 - Pseudokirchneriella subcapitata (green algae) - > 100 mg/l - 72 h
(OECD Test Guideline 201)
Remarks: (in analogy to similar products)
The value is given in analogy to the following substances: diammonium thiosulphate

Toxicity to bacteria
static test EC50 - activated sludge - > 1,000 mg/l - 3 h
(OECD Test Guideline 209)
Remarks: (in analogy to similar products)
The value is given in analogy to the following substances: diammonium thiosulphate
12.2 Persistence and degradability
The methods for determining biodegradability are not applicable to inorganic substances.

<table>
<thead>
<tr>
<th>Chemical Oxygen</th>
<th>405 mg/g</th>
</tr>
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<tbody>
<tr>
<td>Demand (COD)</td>
<td>Remarks: (IUCLID)</td>
</tr>
</tbody>
</table>

12.3 Bioaccumulative potential
No data available

12.4 Mobility in soil
No data available

12.5 Results of PBT and vPvB assessment
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects
Additional ecological information
Discharge into the environment must be avoided.

SECTION 13: Disposal considerations

13.1 Waste treatment methods
Product
Waste material must be disposed of in accordance with the national and local regulations. No mixing with other waste. Handle uncleaned containers like the product. See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

SECTION 14: Transport information

14.1 UN number
ADR/RID: -  IMDG: -  IATA-DGR: -

14.2 UN proper shipping name
ADR/RID: Not dangerous goods  IMDG: Not dangerous goods  IATA-DGR: Not dangerous goods

14.3 Transport hazard class(es)
ADR/RID: -  IMDG: -  IATA-DGR: -

14.4 Packaging group
ADR/RID: -  IMDG: -  IATA-DGR: -

14.5 Environmental hazards
ADR/RID: no  IMDG Marine pollutant: no  IATA-DGR: no

14.6 Special precautions for user

14.7 Incompatible materials
Strong oxidizing agents

Further information
Not classified as dangerous in the meaning of transport regulations.
SECTION 15: Regulatory information

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

**Notification status**
- **AICS:** On the inventory, or in compliance with the inventory
- **DSL:** All components of this product are on the Canadian DSL
- **ENCS:** On the inventory, or in compliance with the inventory
- **ISHL:** On the inventory, or in compliance with the inventory
- **KECI:** On the inventory, or in compliance with the inventory
- **NZIoC:** On the inventory, or in compliance with the inventory
- **PICCS:** On the inventory, or in compliance with the inventory

SECTION 16: Other information

**Further information**
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

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