

SAFETY DATA SHEET

Version 8.14
Revision Date 09/06/2024
Print Date 09/07/2024

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

1.1 Product identifiers

Product name : Sodium dithionite EMPLURA®
Product Number : 1.06505
Catalogue No. : 106505
Brand : Millipore
Index-No. : 016-028-00-1
CAS-No. : 7775-14-6

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

Identified uses : Materials for use in technical applications
Uses advised against : The product is being supplied under the TSCA R&D Exemption (40 CFR Section 720.36). It is the recipient's responsibility to comply with the requirements of the R&D exemption. The product may not be used for a non-exempt commercial purpose under TSCA unless appropriate consent is granted in writing by MilliporeSigma.

1.3 Details of the supplier of the safety data sheet

Company : Sigma-Aldrich Inc.
3050 SPRUCE ST
ST. LOUIS MO 63103
UNITED STATES
Telephone : +1 314 771-5765
Fax : +1 800 325-5052

1.4 Emergency telephone

Emergency Phone # : 800-424-9300 CHEMTREC (USA) +1-703-527-3887 CHEMTREC (International) 24 Hours/day; 7 Days/week

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Self-heating chemicals (Category 1), H251
Eye irritation (Category 2A), H319
Short-term (acute) aquatic hazard (Category 3), H402

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal Word

Danger

Hazard Statements

H251 Self-heating; may catch fire.
 H319 Causes serious eye irritation.
 H402 Harmful to aquatic life.

Precautionary Statements

P235 + P410 Keep cool. Protect from sunlight.
 P264 Wash skin thoroughly after handling.
 P273 Avoid release to the environment.
 P280 Wear protective gloves/ eye protection/ face protection.
 P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P337 + P313 If eye irritation persists: Get medical advice/ attention.
 P403 + P235 Store in a well-ventilated place. Keep cool.
 P407 Maintain air gap between stacks/ pallets.
 P420 Store away from other materials.
 P501 Dispose of contents/ container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

Contact with acids liberates toxic gas.

SECTION 3: Composition/information on ingredients

3.1 Substances

Formula : Na₂O₄S₂
 CAS-No. : 7775-14-6
 EC-No. : 231-890-0
 Index-No. : 016-028-00-1

Component	Classification	Concentration
sodium dithionite		
	1; Acute Tox. 4; Eye Irrit. 2A; Aquatic Acute 3; H251, H302, H319, H402	>= 70 - < 90 %
sodium carbonate		
	Eye Irrit. 2A; H319	>= 1 - < 5 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice

Show this material safety data sheet to the doctor in attendance.

If inhaled

After inhalation: fresh air. Consult doctor if feeling unwell.

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. Call in ophthalmologist. Remove contact lenses.

If swallowed

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

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

Carbon dioxide (CO₂) Dry powder Sand

Unsuitable extinguishing media

Water Foam

5.2 Special hazards arising from the substance or mixture

Carbon oxides

Sulfur oxides

Sodium oxides

Combustible.

danger of spontaneous combustion!

Fire may cause evolution of:

Sulfur oxides

Caution! in contact with water product releases:

Sulfur oxides, The product reacts with water and generates heat.

Vapors are heavier than air and may spread along floors.

Forms explosive mixtures with air on intense heating.

Development of hazardous combustion gases or vapours possible in the event of fire.

5.3 Advice for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

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. Avoid substance contact. Ensure adequate ventilation. 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

Advice on safe handling

Caution! Temperatures > 50°C cause evolution of gas in closed containers. Overpressure produces a risk of bursting. Keep workplace dry. Do not allow product to come into contact with water.

Hygiene measures

Change contaminated clothing. Preventive skin protection recommended. Wash hands after working with substance.

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Tightly closed. Keep away from heat and sources of ignition.

Do not store near acids.

Recommended storage temperature see product label.

Storage class

Storage class (TRGS 510): 4.2: Pyrophoric and self-heating hazardous materials

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

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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. Preventive skin protection recommended. 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 EN 16523-1 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 EN 16523-1 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

Body Protection

protective clothing

Respiratory protection

Recommended Filter type: Filter type P2

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer.

These measures have to be properly documented.
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.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Appearance	Form: powder Color: white
b) Odor	stinging
c) Odor Threshold	No data available
d) pH	5.5 - 8.5 at 50 g/l at 20 °C (68 °F)
e) Melting point/freezing point	Melting point: ca.100 °C (ca.212 °F) - (decomposition)
f) Initial boiling point and boiling range	Not applicable
g) Flash point	> 100 °C (> 212 °F) - DIN 51758
h) Evaporation rate	No data available
i) Flammability (solid, gas)	No data available
j) Upper/lower flammability or explosive limits	No data available
k) Vapor pressure	Not applicable
l) Vapor density	No data available
m) Density	2.5 g/cm ³ at 20 °C (68 °F)
Relative density	No data available
n) Water solubility	ca.250 g/l at 20 °C (68 °F) - (slow decomposition)
o) Partition coefficient: n-octanol/water	log Pow: < -4.7 - (External MSDS), Bioaccumulation is not expected.
p) Autoignition temperature	Self-heating; may catch fire.
q) Decomposition temperature	> 80 °C (> 176 °F) -
r) Viscosity	No data available
s) Explosive properties	Not classified as explosive.
t) Oxidizing properties	none

9.2 Other safety information

Bulk density ca.1,250 kg/m³

SECTION 10: Stability and reactivity

10.1 Reactivity

Forms explosive mixtures with air on intense heating.

Self-heating; may catch fire.

A range from approx. 15 Kelvin below the flash point is to be rated as critical.

The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.

Contact with acids liberates toxic gas.

10.2 Chemical stability

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

10.3 Possibility of hazardous reactions

Violent reactions possible with:

Oxidizing agents

salts of oxyhalogenic acids

Risk of ignition or formation of inflammable gases or vapours with:

Generates dangerous gases or fumes in contact with:

Acids

10.4 Conditions to avoid

Exposure to moisture.

Heating (decomposition).

Strong heating.

10.5 Incompatible materials

No data available

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 - 2,500 mg/kg

Acute toxicity estimate Oral - 500.1 mg/kg (sodium dithionite)

(Expert judgment)

Inhalation: No data available

Acute toxicity estimate Dermal - > 5,000 mg/kg

(Calculation method)

Skin corrosion/irritation

No data available

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Serious eye damage/eye irritation

Remarks: Causes serious eye irritation.

Respiratory or skin sensitization

Sensitisation test: - Mouse (sodium dithionite)

Result: negative

(OECD Test Guideline 429)

Germ cell mutagenicity

Test Type: Ames test

Result: negative

Remarks: (External MSDS)

Test Type: Ames test

(sodium dithionite)

Test system: *S. typhimurium*

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

Result: negative

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.

NTP: No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

Reproductive toxicity

No data available

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

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. (sodium dithionite)

SECTION 12: Ecological information**12.1 Toxicity**

Toxicity to fish

LC50 - *Leuciscus idus* (Golden orfe) - 46 - 68 mg/l - 96 h
(DIN 38412)

Remarks: (Regulation (EC) No 1272/2008, Annex VI)

Toxicity to daphnia and other aquatic invertebrates	EC50 - Daphnia magna (Water flea) - 98 mg/l - 48 h Remarks: (External MSDS) (Regulation (EC) No 1272/2008, Annex VI)
Toxicity to daphnia and other aquatic invertebrates	static test EC50 - Daphnia magna (Water flea) - 98.31 mg/l - 48 h (sodium dithionite) Remarks: (ECHA)
Toxicity to algae	IC50 - Desmodesmus subspicatus (green algae) - 206 mg/l - 72 h Remarks: (External MSDS) (Regulation (EC) No 1272/2008, Annex VI)
Toxicity to bacteria	EC50 - Pseudomonas putida - 107 mg/l - 17 h (DIN 38412) Remarks: (Regulation (EC) No 1272/2008, Annex VI)

12.2 Persistence and degradability

The methods for determining the biological degradability are not applicable to inorganic substances.

Chemical Oxygen Demand (COD)	210 mg/g Remarks: (External MSDS)
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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 Endocrine disrupting properties

No data available

12.7 Other adverse effects

Additional ecological information	Reacts with water to form toxic decomposition products. Discharge into the environment must be avoided.
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SECTION 13: Disposal considerations**13.1 Waste treatment methods****Product**

Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

SECTION 14: Transport information**DOT (US)**

UN number: 1384 Class: 4.2 Packing group: II
Proper shipping name: Sodium dithionite
Reportable Quantity (RQ):
Poison Inhalation Hazard: No

IMDG

UN number: 1384 Class: 4.2 Packing group: II EMS-No: F-A, S-J
Proper shipping name: SODIUM DITHIONITE

IATA

UN number: 1384 Class: 4.2 Packing group: II
Proper shipping name: Sodium dithionite

SECTION 15: Regulatory information**CERCLA Reportable Quantity**

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

US State Regulations**Massachusetts Right To Know**

sodium dithionite 7775-14-6

Pennsylvania Right To Know

sodium dithionite 7775-14-6

Maine Chemicals of High Concern

Product does not contain any listed chemicals

Vermont Chemicals of High Concern

Hexamethylenetetramine

100-97-0

Washington Chemicals of High Concern

Product does not contain any listed chemicals

The ingredients of this product are reported in the following inventories:

TSCA : All substances listed as active on the TSCA inventory

TSCA list

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

SECTION 16: Other information**Further information**

The information is believed to be correct but is not exhaustive and will be used solely as a guideline, which is based on current knowledge of the chemical substance or mixture and is applicable to appropriate safety precautions for the product. 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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