



MATERIAL SAFETY DATA SHEET SDS/MSDS

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

1.1 Product identifiers

Product name : Sodium Dithionite 85% Extrapure

Product Number : B-02404

Molecular Formula : $\text{Na}_2\text{S}_2\text{O}_4$

Brand : Bio-Chem

REACH No. : A registration number is not available for this substance as the substance or its uses are exempted from registration or the annual tonnage does not require a registration.

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

1.3 Details of the supplier of the safety data sheet

Company Bio-Chem Chemicals
5455 Nicholson Road, Science Market
Ambala Cantt, 133001 - Haryana
+91 82952 41953
info@biofinechemical.com - www.biofinechemical.com

1.4 Emergency telephone

Emergency Phone # +91 99921 51495 (10.00am - 06.30pm) (Office Hours)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Self-heating substances and mixtures, (Category 1) H251: Self-heating; may catch fire.

Acute toxicity, (Category 4) H302: Harmful if swallowed.

Eye irritation, (Category 2) H319: Causes serious eye irritation.

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram



Signal Word

Danger

Hazard Statements

H251

Self-heating; may catch fire.

H302

Harmful if swallowed.

H319

Causes serious eye irritation.

Precautionary Statements

P235

Keep cool.

P264

Wash skin thoroughly after handling.

P280

Wear protective gloves/ protective clothing/ eye protection/ face protection.

P301 + P312

IF SWALLOWED: Call a POISON CENTER/ doctor 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.

P337 + P313

If eye irritation persists: Get medical advice/ attention.

Supplemental Hazard information (EU)

EUH031

Contact with acids liberates toxic gas.

EUH208

Contains: Hexamethylenetetramine. May produce an allergic reaction.

Reduced Labeling (≤ 125 ml)

Pictogram



Signal Word

Danger

Hazard Statements

H251

Self-heating; may catch fire.

Precautionary Statements

P235

Keep cool.

P280

Wear protective gloves/ protective clothing/ eye protection/ face protection.

Supplemental Hazard information (EU)

EUH031

Contact with acids liberates toxic gas.

2.3 Other hazards

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.

Ecological information:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

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			
CAS-No.	7775-14-6	Self-heat. 1; Acute Tox. 4; Eye Irrit. 2; H251, H302, H319	>= 70 - < 90 %
EC-No.	231-890-0		
Index-No.	016-028-00-1		
sodium carbonate			
CAS-No.	497-19-8	Eye Irrit. 2; H319	>= 1 - < 10 %
EC-No.	207-838-8		
Index-No.	011-005-00-2		
Hexamethylenetetramine			
CAS-No.	100-97-0	Flam. Sol. 2; Skin Sens. 1B; H228, H317	>= 0,1 - < 1 %
EC-No.	202-905-8		
Index-No.	612-101-00-2		

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

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with workplace control parameters

8.2 Exposure controls

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

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.

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.

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) Physical state | powder |
| b) Color | white |
| c) Odor | stinging |
| d) Melting point/freezing point | Melting point: ca.100 °C - (decomposition) |
| e) Initial boiling point and boiling range | Not applicable |
| f) Flammability (solid, gas) | No data available |
| g) Upper/lower | No data available |

flammability or
explosive limits

- | | | |
|----|--|--|
| h) | Flash point | > 100 °C - DIN 51758 |
| i) | Autoignition temperature | Self-heating; may catch fire. |
| j) | Decomposition temperature | > 80 °C |
| k) | pH | 5,5 - 8,5 at 50 g/l at 20 °C |
| l) | Viscosity | Viscosity, kinematic: No data available
Viscosity, dynamic: No data available |
| m) | Water solubility | ca.250 g/l at 20 °C - (slow decomposition) |
| n) | Partition coefficient: n-octanol/water | log Pow: < -4,7 - (External MSDS), Bioaccumulation is not expected. |
| o) | Vapor pressure | Not applicable |
| p) | Density | 2,5 g/cm ³ at 20 °C |
| | Relative density | No data available |
| q) | Relative vapor density | No data available |
| r) | Particle characteristics | 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

Dermal: No data available

Skin corrosion/irritation

No data available

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

No data available

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**Endocrine disrupting properties****Product:**

Assessment

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

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 210 mg/g

Demand (COD) Remarks: (External MSDS)

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

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.

12.6 Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

Additional ecological information Reacts with water to form toxic decomposition products.

Discharge into the environment must be avoided.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

No data available

SECTION 14: Transport information

14.1 UN number

ADR/RID: 1384

IMDG: 1384

IATA: 1384

14.2 UN proper shipping name

ADR/RID: SODIUM DITHIONITE

IMDG: SODIUM DITHIONITE

IATA: Sodium dithionite

14.3 Transport hazard class(es)

ADR/RID: 4.2

IMDG: 4.2

IATA: 4.2

14.4 Packaging group

ADR/RID: II

IMDG: II

IATA: II

14.5 Environmental hazards

ADR/RID: no

IMDG Marine pollutant: no

IATA: no

14.6 Special precautions for user

Tunnel restriction code : (D/E)

Further information : No data available

SECTION 15: Regulatory information

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

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

Authorisations and/or restrictions on use

Regulation (EU) 2019/1148 on the marketing and use of explosives precursors : Hexamethylenetetramine

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII) : Hexamethylenetetramine

Other regulations

Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable.

Take note of Dir 94/33/EC on the protection of young people at work.

15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out

SECTION 16: Other information

Full text of H-Statements

H228	Flammable solid.
H251	Self-heating; may catch fire.
H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
EUH031	Contact with acids liberates toxic gas.