



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 Perborate Tetrahydrate

CAS-No. : 10486-00-7

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

Identified uses : Laboratory chemicals, Industrial & for professional use only.

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 number

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

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Oxidizing solids (Category 2), H272

Acute toxicity, Oral (Category 4), H302

Serious eye damage (Category 1), H318

Reproductive toxicity (Category 1B), H360Df

Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335

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

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram



Signal word

Danger

Hazard statement(s)

H272

May intensify fire; oxidizer.

H302

Harmful if swallowed.

H318

Causes serious eye damage.

H335

May cause respiratory irritation.

H360Df

May damage the unborn child. Suspected of damaging fertility.

Precautionary statement(s)	
P201	Obtain special instructions before use.
P220	Keep/Store away from clothing/ combustible materials.
P261	Avoid breathing dust.
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.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.
Supplemental Hazard Statements	none
Restricted to professional users.	

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.

SECTION 3: Composition/information on ingredients

3.1 Substances

Formula	: NaBO ₃ ·4H ₂ O
Molecular weight	: 153.86 g/mol
CAS-No.	: 10486-00-7
EC-No.	: 239-172-9
Index-No.	: 005-017-00-7

Hazardous ingredients according to Regulation (EC) No 1272/2008

Component	Classification	Concentration
Sodium peroxometaborate tetrahydrate Included in the Candidate List of Substances of Very High Concern (SVHC) according to Regulation (EC) No. 1907/2006 (REACH)		
CAS-No.	10486-00-7	Ox. Sol. 2; Acute Tox. 4; Eye <= 100 %
EC-No.	239-172-9	Dam. 1; Repr. 1B; STOT SE 3;
Index-No.	005-017-00-7	H272, H302, H318, H360Df, H335
Concentration limits:		
>= 9 %: Repr. 1B, H360Df;		
6.5 - < 9 %: Repr. 1B, H360D;		
>= 22 %: Eye Dam. 1, H318;		
14 - < 22 %: Eye Irrit. 2, H319;		

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

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. 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

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

Borane/boron oxides, Sodium oxides

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

Use water spray to cool unopened containers.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see section 8.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up

Sweep up and shovel. Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Avoid exposure - obtain special instructions before use.

Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition - No smoking. Keep away from heat and sources of ignition.

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

Moisture sensitive.

Storage class (TRGS 510): Oxidizing 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

8.2 Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use (EN 143) respirator cartridges as a backup to engineering controls. If th full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

SECTION 9: Physical and chemical properties**9.1 Information on basic physical and chemical properties**

a) Appearance	Form: crystalline Colour: white
b) Odour	No data available
c) Odour Threshold	No data available
d) pH	10.0 - 10.4 at 10 g/l at 25 °C
e) Melting point/freezing point	Melting point/range: 60 °C - dec.
f) Initial boiling point and boiling range	No data available
g) Flash point	Not applicable
h) Evaporation rate	No data available
i) Flammability (solid, gas)	No data available
j) Upper/lower flammability or explosive limits	No data available
k) Vapour pressure	No data available
l) Vapour density	No data available
m) Relative density	No data available
n) Water solubility	No data available
o) Partition coefficient: n-octanol/water	No data available
p) Auto-ignition temperature	No data available
q) Decomposition temperature	No data available
r) Viscosity	No data available
s) Explosive properties	No data available
t) Oxidizing properties	The substance or mixture is classified as oxidizing with the category 2.

9.2 Other safety information

No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

No data available

10.5 Incompatible materials

Metals, Metallic salts, acids, Bases, Reducing agents

10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Borane/boron oxides, Sodium oxides

Other decomposition products - No data available

In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

LDLO Oral - Infant - 400 mg/kg(Sodium peroxometaborate tetrahydrate)

LDLO Oral - Child - 250 mg/kg(Sodium peroxometaborate tetrahydrate)

LDLO Oral - Human - 214 mg/kg(Sodium peroxometaborate tetrahydrate)

LD50 Oral - Rat - 1,200 mg/kg(Sodium peroxometaborate tetrahydrate)

Remarks: Behavioral:Convulsions or effect on seizure threshold. Behavioral:Muscle weakness.

LD50 Dermal - Rabbit - > 2,000 mg/kg(Sodium peroxometaborate tetrahydrate)

Skin corrosion/irritation

Skin - Rabbit(Sodium peroxometaborate tetrahydrate)

Result: No skin irritation

Serious eye damage/eye irritation

Eyes - Rabbit(Sodium peroxometaborate tetrahydrate)

Result: Severe eye irritation

Respiratory or skin sensitisation

No data available(Sodium peroxometaborate tetrahydrate)

Germ cell mutagenicity

No data available(Sodium peroxometaborate tetrahydrate)

Carcinogenicity

IARC: No component 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

Presumed human reproductive toxicant May damage the unborn child. Suspected of damaging fertility.(Sodium peroxometaborate tetrahydrate)

Specific target organ toxicity - single exposure

The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation.(Sodium peroxometaborate tetrahydrate)

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available(Sodium peroxometaborate tetrahydrate)

Additional Information

RTECS: SC7350000

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

SECTION 12: Ecological information**12.1 Toxicity**

Toxicity to fish LC50 - Danio rerio (zebra fish) - 51 mg/l - 96 h(Sodium peroxometaborate tetrahydrate)

Toxicity to daphnia and other aquatic invertebrates EC50 - Daphnia magna (Water flea) - 11 mg/l - 48 h(Sodium peroxometaborate tetrahydrate)

Toxicity to algae IC50 - Desmodesmus subspicatus (green algae) - 26.8 mg/l - 96 h(Sodium peroxometaborate tetrahydrate)

12.2 Persistence and degradability

Biodegradability Biotic/Aerobic (Sodium peroxometaborate tetrahydrate) Result: 85 % - Readily biodegradable.

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available(Sodium peroxometaborate tetrahydrate)

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 Other adverse effects

Harmful to aquatic life.

No data available

SECTION 13: Disposal considerations**13.1 Waste treatment methods****Product**

Burn in a chemical incinerator equipped with an afterburner and scrubber b highly flammable.
Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product.

SECTION 14: Transport information**14.1 UN number**

ADR/RID: 1479

IMDG: 1479

IATA: 1479

14.2 UN proper shipping name

ADR/RID: OXIDIZING SOLID, N.O.S. (Sodium peroxometaborate tetrahydrate)

IMDG: OXIDIZING SOLID, N.O.S. (Sodium peroxometaborate tetrahydrate)

IATA: Oxidizing solid, n.o.s. (Sodium peroxometaborate tetrahydrate)

14.3 Transport hazard class(es)

ADR/RID: 5.1

IMDG: 5.1

IATA: 5.1

14.4 Packaging group

ADR/RID: III

IMDG: III

IATA: III

14.5 Environmental hazards

ADR/RID: no

IMDG Marine pollutant: no

IATA: no

14.6 Special precautions for user

No data available

SECTION 15: Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

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

Authorisations and/or restrictions on use**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 referred to under sections 2 and 3.**

H272	May intensify fire; oxidizer.
H302	Harmful if swallowed.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H360D	May damage the unborn child.
H360Df	May damage the unborn child. Suspected of damaging fertility.