

## Chemical Safety Data Sheet MSDS / SDS

## Sodium perborate tetrahydrate

Revision Date:2024-12-28 Revision Number:1

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

## Product identifier

Product name : Sodium perborate tetrahydrate  
CBnumber : CB0214579  
CAS : 10486-00-7  
EINECS Number : 600-611-8  
Synonyms : sodium perborate tetrahydrate,sodium peroxoborate tetrahydrate

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

Relevant identified uses : For R&D use only. Not for medicinal, household or other use.  
Uses advised against : none

## Company Identification

Company : Chemicalbook  
Address : Building 1, Huihuang International, Shangdi 10th Street, Haidian District, Beijing  
Telephone : 400-158-6606

## SECTION 2: Hazards identification

## Classification of the substance or mixture

Oxidizing solids, Category 2  
Serious eye damage, Category 1  
Acute toxicity - Category 3, Inhalation  
Specific target organ toxicity – single exposure, Category 3  
Reproductive toxicity, Category 1B

## Label elements

## Pictogram(s)

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

H360 May damage fertility or the unborn child

#### **Precautionary statement(s)**

P201 Obtain special instructions before use.

P220 Keep/Store away from clothing/.../combustible materials.

P221 Take any precaution to avoid mixing with combustibles/...

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P280 Wear protective gloves/protective clothing/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.

Continuerinsing.

P308+P313 IF exposed or concerned: Get medical advice/attention.

P405 Store locked up.

#### **Prevention**

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P220 Keep away from clothing and other combustible materials.

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P271 Use only outdoors or in a well-ventilated area.

P203 Obtain, read and follow all safety instructions before use.

#### **Response**

P370+P378 In case of fire: Use ... to extinguish.

P305+P354+P338 IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P317 Get medical help.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P316 Get emergency medical help immediately.

P321 Specific treatment (see ... on this label).

P319 Get medical help if you feel unwell.

P318 IF exposed or concerned, get medical advice.

#### **Storage**

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked up.

#### **Disposal**

P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

#### **Other hazards**

no data available

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## SECTION 3: Composition/information on ingredients

#### **Substance**

Product name : Sodium perborate tetrahydrate

|           |  |
|-----------|--|
| Synonyms  | : sodium perborate tetrahydrate,sodium peroxoborate tetrahydrate |
| CAS       | : 10486-00-7   |
| EC number | : 600-611-8  |
| MF        | : BH <sub>4</sub> NaO <sub>4</sub>                               |
| MW        | : 101.83   |

## SECTION 4: First aid measures

### Description of first aid measures

#### If inhaled

Fresh air, rest.

#### Following skin contact

First rinse with plenty of water for at least 15 minutes, then remove contaminated clothes and rinse again.

#### Following eye contact

First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.

#### Following ingestion

Rinse mouth. Give a slurry of activated charcoal in water to drink. Rest. Refer for medical attention .

### Most important symptoms and effects, both acute and delayed

no data available

### Indication of any immediate medical attention and special treatment needed

no data available

## SECTION 5: Firefighting measures

### Extinguishing media

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

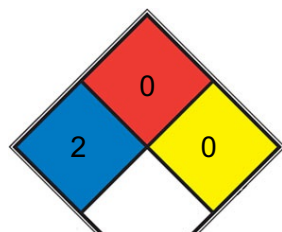
### Specific Hazards Arising from the Chemical

Not combustible but enhances combustion of other substances. Gives off irritating or toxic fumes (or gases) in a fire. Risk of fire and explosion on contact with heat or combustible substances.

### Advice for firefighters

In case of fire in the surroundings, use appropriate extinguishing media. In case of fire: keep drums, etc., cool by spraying with water. NO direct contact with water.

### NFPA 704





☒ HEALTH 2 Intense or continued but not chronic exposure could cause temporary incapacitation or possible residual injury (e.g. [diethyl ether](#), ammonium phosphate, iodine)

☒ FIRE 0 Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand. Materials that will not burn in air when exposed to a temperature of 820 °C (1,500 °F) for a period of 5 minutes.(e.g. Carbon tetrachloride)

☒ REACT 0 Normally stable, even under fire exposure conditions, and is not reactive with water (e.g. helium,[N2](#))

☐ SPEC.

☐ HAZ.

## SECTION 6: Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Personal protection: particulate filter respirator adapted to the airborne concentration of the substance. Do NOT let this chemical enter the environment. Sweep spilled substance into covered dry, sealable containers. Do NOT absorb in saw-dust or other combustible absorbents.

### Environmental precautions

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

### Methods and materials for containment and cleaning up

Collect and arrange disposal. Keep the chemical in suitable and closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

## SECTION 7: Handling and storage

### Precautions for safe handling

NO contact with flammables. Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

### Conditions for safe storage, including any incompatibilities

Well closed. Separated from combustible substances, reducing agents and strong acids.

## SECTION 8: Exposure controls/personal protection

### Control parameters

#### Occupational Exposure limit values

|           |                                |
|-----------|--------------------------------|
| Component | Sodium perborate, tetrahydrate |
| CAS No.   | 10486-00-7                     |

|        | Limit value - Eight hours |                   | Limit value - Short term |                   |
|--------|---------------------------|-------------------|--------------------------|-------------------|
|        | ppm                       | mg/m <sup>3</sup> | ppm                      | mg/m <sup>3</sup> |
| Latvia | ?                         | 1                 | ?                        | ?                 |
|        | Remarks                   |                   |                          |                   |

#### Biological limit values

no data available

#### Exposure controls

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the risk-elimination area.

#### Individual protection measures

##### Eye/face protection

Wear safety goggles.

##### Skin protection

Protective gloves.

##### Respiratory protection

Use local exhaust or breathing protection.

##### Thermal hazards

no data available

## SECTION 9: Physical and chemical properties

#### Information on basic physicochemical properties

|  |                                    |
|--|------------------------------------|
| Physical state   | Crystalline Powder                 |
| Colour   | White                              |
| Odour  | no data available                  |
| Melting point/freezing point                             | 267°C(lit.)                        |
| Boiling point or initial boiling point and boiling range | 211°C/20mmHg(lit.)                 |
| Flammability   | no data available                  |
| Lower and upper explosion limit/flammability limit       | no data available                  |
| Flash point  | 75°C(lit.)                         |
| Auto-ignition temperature                                | no data available                  |
| Decomposition temperature                                | no data available                  |
| pH   | 10 (15g/l, H <sub>2</sub> O, 20°C) |
| Kinematic viscosity                                      | no data available                  |
| Solubility   | 23g/l                              |
| Partition coefficient n-octanol/water                    | no data available                  |
| Vapour pressure  | no data available                  |
| Density and/or relative density                          | 1.73                               |

|                         |                   |
|-------------------------|-------------------|
| Relative vapour density | no data available |
|-------------------------|-------------------|

|                          |                   |
|--------------------------|-------------------|
| Particle characteristics | no data available |
|--------------------------|-------------------|

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## SECTION 10: Stability and reactivity

### Reactivity

no data available

### Chemical stability

no data available

### Possibility of hazardous reactions

Decomposes above 60°C . This produces toxic fumes including sodium oxide. Decomposes on contact with water. This produces boric acid and hydrogen peroxide. The substance is a strong oxidant. It reacts with combustible and reducing materials. The solution in water is a weak base.

### Conditions to avoid

no data available

### Incompatible materials

no data available

### Hazardous decomposition products

no data available

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## SECTION 11: Toxicological information

### Acute toxicity

- Oral: no data available
- Inhalation: no data available
- Dermal: no data available

### Skin corrosion/irritation

no data available

### Serious eye damage/irritation

no data available

### Respiratory or skin sensitization

no data available

### Germ cell mutagenicity

no data available

### **Carcinogenicity**

no data available

### **Reproductive toxicity**

no data available

### **STOT-single exposure**

The substance is irritating to the eyes and respiratory tract.

### **STOT-repeated exposure**

no data available

### **Aspiration hazard**

Evaporation at 20°C is negligible; a harmful concentration of airborne particles can, however, be reached quickly when dispersed, especially if powdered.

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## **SECTION 12: Ecological information**

### **Toxicity**

Toxicity to fish: no data available

Toxicity to daphnia and other aquatic invertebrates: no data available

Toxicity to algae: no data available

Toxicity to microorganisms: no data available

### **Persistence and degradability**

no data available

### **Bioaccumulative potential**

no data available

### **Mobility in soil**

no data available

### **Other adverse effects**

no data available

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## **SECTION 13: Disposal considerations**

### **Disposal methods**

#### **Product**

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

#### **Contaminated packaging**

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

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## SECTION 14: Transport information

### UN Number

ADR/RID: UN1479 (For reference only, please check.)

IMDG: UN1479 (For reference only, please check.)

IATA: UN1479 (For reference only, please check.)

### UN Proper Shipping Name

ADR/RID: OXIDIZING SOLID, N.O.S. (For reference only, please check.)

IMDG: OXIDIZING SOLID, N.O.S. (For reference only, please check.)

IATA: OXIDIZING SOLID, N.O.S. (For reference only, please check.)

### Transport hazard class(es)

ADR/RID: 5.1 (For reference only, please check.)

IMDG: 5.1 (For reference only, please check.)

IATA: 5.1 (For reference only, please check.)

### Packing group, if applicable

ADR/RID: I (For reference only, please check.)

IMDG: I (For reference only, please check.)

IATA: I (For reference only, please check.)

### Environmental hazards

ADR/RID: No

IMDG: No

IATA: No

### Special precautions for user

no data available

### Transport in bulk according to IMO instruments

no data available

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## SECTION 15: Regulatory information

### Safety, health and environmental regulations specific for the product in question

#### European Inventory of Existing Commercial Chemical Substances (EINECS)

Not Listed.

#### EC Inventory



Not Listed.

**United States Toxic Substances Control Act (TSCA) Inventory**

Not Listed.

**China Catalog of Hazardous chemicals 2015**

Not Listed.

**New Zealand Inventory of Chemicals (NZIoC)**

Listed.

**PICCS**

Listed.

**Vietnam National Chemical Inventory**

Listed.

**IECSC**

Listed.

**Korea Existing Chemicals List (KECL)**

Not Listed.

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## SECTION 16: Other information

### Abbreviations and acronyms

CAS: Chemical Abstracts Service

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

RID: Regulation concerning the International Carriage of Dangerous Goods by Rail

IMDG: International Maritime Dangerous Goods

IATA: International Air Transportation Association

TWA: Time Weighted Average

STEL: Short term exposure limit

LC50: Lethal Concentration 50%

LD50: Lethal Dose 50%

EC50: Effective Concentration 50%

### References

IPCS - The International Chemical Safety Cards (ICSC), website: <http://www.ilo.org/dyn/icsc/showcard.home>

HSDB - Hazardous Substances Data Bank, website: <https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm>

IARC - International Agency for Research on Cancer, website: <http://www.iarc.fr/>

eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website: [http://www.echemportal.org/echemportal/index?pagelD=0&request\\_locale=en](http://www.echemportal.org/echemportal/index?pagelD=0&request_locale=en)

CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>

ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>

ERG - Emergency Response Guidebook by U.S. Department of Transportation, website: <http://www.phmsa.dot.gov/hazmat/library/erg>

Germany GESTIS-database on hazard substance, website: <http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp>

ECHA - European Chemicals Agency, website: <https://echa.europa.eu/>

### Other Information

Rinse contaminated clothing with plenty of water because of fire hazard.

**Disclaimer:**

The information in this MSDS is only applicable to the specified product, unless otherwise specified, it is not applicable to the mixture of this product and other substances. This MSDS only provides information on the safety of the product for those who have received the appropriate professional training for the user of the product. Users of this MSDS must make independent judgments on the applicability of this SDS. The authors of this MSDS will not be held responsible for any harm caused by the use of this MSDS.