

# SAFETY DATA SHEET

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## 1. Chemical Product and Supplier Identification

Product Name: Sodium Perborate Tetrahydrate

Synonyms: Sodium Perborate, SPB, Perboric Acid, Sodium Salt Sodium Metaborate Peroxyhydrate

Manufacturer: Shangyu Jiehua Chemical Co., Ltd.  
Sanpeng Bridge, Baiguan Town  
Shangyu City, Zhejiang Province, China 312351

USA Branch:  
Kingsfield Inc./Shangyu Chemical USA  
1 Dewolf Rd. Suite 210  
Old Tappan, NJ 07675  
Tel: 201-767-0414

Emergency contact information:  
CHEMTREC Customer Service  
Tel: 1-800-262-8200 (within the U.S.)  
Tel: +1 703-741-5500 (from anywhere in the world)  
Email: chemtrec@chemtrec.com

## 2. Hazards Identification

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

Acute toxicity, Oral (Category 4), H302  
Serious eye damage (Category 1), H318  
Reproductive toxicity (Category 1B), H360  
Specific target organ toxicity-single exposure (Category 3), Respiratory system, H335  
Acute aquatic toxicity (Category 3), H402

GHS label elements



**Signal word:** Danger

Hazard Statements

H302 Harmful if swallowed.  
H318 Causes serious eye damage.  
H335 May cause respiratory irritation.  
H360 May damage fertility or the unborn child.  
H402 Harmful to aquatic life.

Precautionary Statements

P201 Obtain special instructions before use.  
P202 Do not handle until all safety precautions have been read and understood.  
P210 Keep away from heat.  
P220 Keep/Store away from clothing/combustible materials.  
P221 Take any precaution to avoid mixing with combustibles.

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P261 Avoid breathing dust/fume/gas/mist/vapors/spray.  
P264 Wash skin thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P271 Use only outdoors or in a well-ventilated area.  
P273 Avoid release to the environment  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.  
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P310 Immediately call a POISON CENTER or doctor/physician.  
P330 Rinse mouth.  
P370+P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.  
P403+P233 Store in a well-ventilated place. Keep container tightly closed.  
P405 Store locked up.  
P501 Dispose of contents/container to an approved waste disposal plant.

Hazards not otherwise classified (HNOC) or not covered by GHS- none

Potential Health Effects:

<u>General</u>	Ingestion or skin absorption of large amounts can cause vomiting, diarrhea of mucous and blood, lethargy, twitching of facial muscles and extremities, convulsions, fever, yellow discoloration of the skin, a fall in blood pressure, collapse, coma and death. Kidney damage can also occur.
<u>Inhalation</u>	Slightly irritating to the respiratory system.
<u>Eye Contact</u>	Irritating to the eyes.
<u>Skin Contact</u>	Slightly irritating to skin.
<u>Ingestion</u>	Very low toxicity. Boron poisoning may cause vomiting, blood circulation depression and blotches.

### 3. Composition/Information on Ingredients

<u>Components Formula</u>	<u>CAS No.</u>	<u>Proportions (%)</u>
Sodium Perborate Tetrahydrate	10486-00-7	98.6

### 4. First-Aid Measures

<u>General</u>	Ensure an eye bath and safety shower are available and ready for use.
<u>Inhalation</u>	Remove the person to fresh air. If required seek medical advice.
<u>Eye Contact</u>	Flush immediately with plenty of water for at least 15 minutes. If required, seek medical advice.
<u>Skin Contact</u>	Wash with water.
<u>Ingestion</u>	DO NOT induce vomiting. Let the person drink plenty of water or milk. Seek medical advice. Never give anything orally if the person is unconscious and DO NOT give any kind of antidotes unless expressly prescribed.

### 5. Fire-Fighting Measures

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Flash Point: Not applicable

Ignition Temperature: Not applicable

Flammability: Non-flammable

Danger of Explosion: Non-explosive

Fire Hazards: Releases oxygen at high temperatures. Incompatible with mixtures containing heavy metal salts, combustible organic matter or moisture. Decomposition can occur gradually, releasing controlled amounts of oxygen. Hazardous polymerization will not occur. Avoid contact with heat and humidity sources. Avoid flammable compounds, very reactive organic compounds, and heavy metals salts, reducing compounds, acids and alkalis.

Extinguishing Media: Fire-fighters should wear full protective clothing including self-contained breathing apparatus. In case of fire use water to extinguish. Use equipment/ media appropriate to surrounding fire conditions.

## 6. Accidental Release Measures

Spills: Clean-up personnel should wear full protective clothing including breathing apparatus in dusty environments. Collect the product in dry and clean containers. Wash the concerned area with plenty of water.

Disposal: Dispose of in accordance with all Local, State and Federal regulations at an approved waste disposal facility.

## 7. Handling and Storage

Handling: Clean and dry process piping and equipment before using this product. Never return unused product to original storage container. Keep away from incompatible products. Containers and equipment used to handle the product should be exclusively for that product. Avoid any contact with water or humidity. For more information, consult the supplier.

Storage: Product in polythene multi-layer paper bags must be stored in dry, fresh and well-ventilated places away from heat and humidity sources. Stores containing the bulk product must be protected from heat and humidity sources as decomposition in confined places may cause overpressures. Storing temperature should never exceed 40 deg C to avoid product decomposition. Keep separate from incompatible materials and combustible products.

## 8. Exposure Controls/Personal Protection

Exposure Standards: An exposure standard has not been established for this product by Work safe China. TLV-TWA (ACGIH 1994/95) = 10 mg/mc (as total particulate N.O.S.)

Engineering Controls: Ensure adequate ventilation to maintain exposure levels below standards, including the use of local and/or mechanical ventilation.

Personal Protection: Do not scatter dust when using. Wear a dust mask, rubber gloves, goggles and/or faceshield and other industrial clothing to minimize exposure. Wash hands and face thoroughly after handling and before work breaks, eating, drinking, smoking and using toilet facilities.

## 9. Physical and Chemical Properties

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Appearance: White free-flowing crystalline powder.

Formula:  $\text{NaBO}_3 \cdot 4\text{H}_2\text{O}$  /  $\text{NaBO}_2 \cdot \text{H}_2\text{O}_2 \cdot 3\text{H}_2\text{O}$

Odor: None

Bulk Density: 700 - 900 g/L Insoluble in most organic solvents.

Solubility in water: 23 g/l (25 deg C)

PH: 10 (1.5% in  $\text{H}_2\text{O}$ )

Melting Point: 60 deg C

Vapor Pressure: Not applicable

Specific Gravity: Not applicable (water = 1)

Lower Explosion Limit: Not applicable

Upper Explosion Limit: Not applicable

## 10. Stability and Reactivity

Stability: Stable, under certain conditions (see below).

Conditions to avoid: Heat / Sources of heat. Moisture.

Materials to avoid:

Water

Acids

Bases

Salts of heavy metals

Reducing agents

## 11. Toxicological Information

Dermal LD50 = not available Inhalation LC50 = not available After 28 days (Rat oral test 1000 mg/kg) ; very low toxicity.

Toxicity Data: Oral LD50 = 2243 mg/kg (Rat) Dermal LD50 = not available Inhalation LC50 = not available After 28 days (Rat oral test 1000 mg/kg) ; very low toxicity. Boron poisoning may cause vomiting, blood circulation depression and blotches. Not acknowledged as carcinogenic by research institutes IARC, NTP, OSHA or ACGIH. The product molecule contains the peroxide group, which showed to be mutagenic in vitro without metabolic activation and generally not mutagenic with metabolic activation. In vivo it did not show any effect after oral administration. The product is not acknowledged as mutagenic by research institutes.

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## 12. Ecological Information

When it is used in waste water, tetrahydrate sodium perborate rapidly degrades and develops sodium borate and hydrogen peroxide. The latter further breaks down into water and oxygen.

Toxicity to fish : LC50 51 mg/l/96hr (Brachydanio rerio) (NaBO<sub>3</sub>.H<sub>2</sub>O) NOEC 25 mg/l/96hr (Brachydanio rerio) (NaBO<sub>3</sub>.H<sub>2</sub>O)

Toxicity to daphnia : LC50 11 mg/l/48hr (Daphnia magna) (NaBO<sub>3</sub>.H<sub>2</sub>O) NOEC 8 mg/l/48hr (Daphnia magna) (NaBO<sub>3</sub>.H<sub>2</sub>O)

Toxicity to algae : EC50 12 mg/l/96hr (Scenedesmus suspicatus) (NaBO<sub>3</sub>.H<sub>2</sub>O) EC50 18 mg/l/96hr (Scenedesmus suspicatus) (NaBO<sub>3</sub>.4H<sub>2</sub>O)

Chemical Fate Information: No data available

## 13. Disposal Considerations

Waste treatment: Dispose of in an approved waste facility operated by an authorized contractor in compliance with federal, state and local regulations.

Packaging treatment: The empty and clean containers are to be recycled or disposed of in conformity with local regulations.

## 14. Transport Information

Proper Shipping Name: Sodium Perborate Tetrahydrate

Hazard Class: Not applicable

Packing Group: II

EPG No.: Not applicable

Subsidiary Risk: None Allocated

## 15. Regulatory Information

SARA 302 Components

No chemicals in this material are subject to the reporting requirements SARA Title III, Section 302.

SARA 313 Components

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

SARA 311/312 Hazards

Reactivity Hazard, Acute Health Hazard, Chronic Health Hazard

## 16. Other Information

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The data in this Safety Data Sheet is believed to be correct. However, since conditions of use are outside our control it should not be taken as a warranty of representation for which Shangyu Jiehua Chemical assumes legal responsibility. This information is provided solely for your consideration, investigation, and verification.

Effective Date: March 1, 2015