

Safety Data Sheet

acc. to OSHA HCS

Printing date 09/29/2014

Reviewed on 09/29/2014

1 Identification

- **Product identifier**
- **Trade name:** Sodium phosphate tribasic dodecahydrate
- **Article number:** Trisodium Phosphate(TSP)
- **CAS Number:**
10101-89-0
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Sichuan Xinsheng Bio-technology Co.,Ltd
Mazu Village , Mazu Town
Shifang, Sichuan, P.R. CHINA
- **Information department:**
Product safety department
sunny_kwok@cathayindustriesAP.com
- **Emergency telephone number:** Chemtrec at 1-800-424-9300.

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS07

Skin Irrit. 2 H315 Causes skin irritation.
 Eye Irrit. 2A H319 Causes serious eye irritation.
 STOT SE 3 H335 May cause respiratory irritation.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**



Xi; Irritant

R36/37/38: Irritating to eyes, respiratory system and skin.

- **Information concerning particular hazards for human and environment:** Not applicable.

- **Classification system:**

The classification is in line with internationally approved calculation standards. It is expanded, however, by information from technical literature and by information furnished by supplier companies.

- **Label elements**

- **Labelling according to EU guidelines:**

The product has been classified and marked in accordance with directives on hazardous materials.

- **Code letter and hazard designation of product:**

Xi Irritant

- **Risk phrases:**

36/37/38 Irritating to eyes, respiratory system and skin.

- **Safety phrases:**

26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

37 Wear suitable gloves.

60 This material and its container must be disposed of as hazardous waste.

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- **Classification system:**

- **NFPA ratings (scale 0 - 4)**



- **HMIS-ratings (scale 0 - 4)**



- **Other hazards**

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterization: Substances**

- **CAS No. Description**

10101-89-0 Sodium phosphate tribasic dodecahydrate

4 First-aid measures

- **Description of first aid measures**

- **General information:** Remove severely contaminated clothing and clean before reuse.

- **After inhalation:**

Loosen tight clothing such as a collar, tie, belt or waistband.

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

In case of unconsciousness place patient stably in side position for transportation.

- **After skin contact:**

Remove contaminated clothing and shoes.

Immediately wash with water and soap and rinse thoroughly.

Seek immediate medical advice.

- **After eye contact:**

Check for and remove any contact lenses.

Rinse opened eye for several minutes under running water. Then consult a doctor.

Protect unharmed eye.

- **After swallowing:**

Rinse out mouth and then drink plenty of water.

If swallowed do not induce vomiting, seek medical advice and show safety data sheet or label

- **Most important symptoms and effects, both acute and delayed**

See Section 11 for more detailed information on health effects and symptoms.

- **Information for doctor:** See Section 11 for more detailed information on health effects and symptoms.

- **Indication of any immediate medical attention and special treatment needed**

See Section 11 for more detailed information on health effects and symptoms.

Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5 Fire-fighting measures

- **Extinguishing media**

- **Suitable extinguishing agents:**

Not flammable. Use appropriate extinguishing media for the combustible material involved in the fire.

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- **For safety reasons unsuitable extinguishing agents:** None known.
- **Special hazards arising from the substance or mixture**
In case of fire, the following can be released:
Phosphorus pentaoxide (P₂O₅).
- **Advice for firefighters**
Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire.
No action shall be taken involving any personal risk or without suitable training.
Move containers from fire area if this can be done without risk.
- **Protective equipment:**
Wear fully protective suit.
Firefighters should use self-contained breathing apparatus.
- **Additional information**
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
Collect contaminated fire fighting water separately. It must not enter the sewage system.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
No action shall be taken involving any personal risk or without suitable training.
Keep away unnecessary and unprotected personnel.
Put on appropriate personal protective equipment (see Section 8).
Avoid formation of dust.
Ensure adequate ventilation
- **Environmental precautions:**
Inform respective authorities in case of seepage into water course or sewage system.
Keep contaminated washing water and dispose of appropriately.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Stop leak if without risk.
Move containers from spill area.
Ensure adequate ventilation.
Vacuum, sweep, shovel or use wet clean-up techniques and place waste material in closed container.
Dispose contaminated material as waste according to item 13.
- **Reference to other sections**
See Section 1 for emergency contact information.
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Precautions for safe handling**
Open and handle receptacle with care.
Prevent formation of dust.
Provide suction extractors if dust is formed.
Ensure good ventilation/exhaustion at the workplace.
- **Information about protection against explosions and fires:** The product is not flammable.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:** Store in a segregated and approved area.
- **Requirements to be met by storerooms and receptacles:**
Store only in the original receptacle.
Containers that have been opened must be carefully resealed and kept upright to prevent leakage.
Do not store in unlabelled containers.
- **Information about storage in one common storage facility:** Do not store together with acids.

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- **Further information about storage conditions:**
Keep receptacle tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:**
Mechanical ventilation may be required to maintain exposure levels below limits.
Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:** Not required.
- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Do not eat, drink, smoke or sniff while working.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
Wash contaminated clothing before reusing.
Ensure that eyewash stations and safety showers are close to the workstation location.
- **Breathing equipment:**
Suitable respiratory protection for lower concentrations or short-term effect: Particle filter EN 143 Type P2, medium efficiency, (solid and liquid particles of harmful substances).
- **Protection of hands:**



Protective gloves

Chemical resistant protective gloves (EN 374).

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
- **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:**



Tightly sealed goggles

Safety glasses with side-shields

- **Body protection:**
Alkaline resistant protective clothing
Boots

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· **Limitation and supervision of exposure into the environment**

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form: Crystalline powder

Color: White

· **Odor:** Odorless

· **pH-value (100 g/l) at 20 °C (68 °F):** 12.6

· **Change in condition**

Melting point/Melting range: 75 °C (167 °F)

· **Flash point:** Not applicable.

· **Flammability (solid, gaseous):** Product is not flammable.

· **Auto igniting:** Product is not selfigniting.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Specific gravity at 20 °C (68 °F):** 1.62 g/cm³ (13.519 lbs/gal)

· **Solubility in / Miscibility with**

Water at 20 °C (68 °F): 130 g/l

· **Other information** No further relevant information available.

10 Stability and reactivity

· **Reactivity**

· **Chemical stability** Stable under normal ambient conditions.

· **Thermal decomposition / conditions to be avoided:** Loss of constitutional water on heating.

· **Possibility of hazardous reactions** Reacts with strong acids.

· **Conditions to avoid** No further relevant information available.

· **Incompatible materials:** Strong acids.

· **Hazardous decomposition products:**

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11 Toxicological information

· **Information on toxicological effects**

· **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

7601-54-9 trisodium orthophosphate

Oral	LD50	> 2000 mg/kg (Rat (female)) (OECD 420)
Dermal	LD50	> 2000 mg/kg (rat) (OECD 402)
Inhalative	LC50/4 hr.	> 0.83 mg/lit (rat) (OECD 403)

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· Repeated dose toxicity :
7601-54-9 trisodium orthophosphate

Oral NOAEL - mg/kg (rat) NOAEL not identified

· Irritation / Corrosion :
7601-54-9 trisodium orthophosphate

Irritation of skin In vivo + (rabbit) (FDA) Irritating

Irritation of eyes In vivo + (rabbit) (FDA) Irritating

· Sensitisation :
7601-54-9 trisodium orthophosphate

Sensitization In vivo - (mouse) (OECD 429) Not sensitizing

· Genetic toxicity :
7601-54-9 trisodium orthophosphate

In vitro mammalian cell gene mutation assay - (mouse) (OECD 476) Negative

In vitro mammalian chromosome aberration test - (Hamster) (OECD 473) Negative

Reverse mutation assay (Ames test) - (Salmonella typhimurium) (OECD 471) Negative

· Toxicity to reproduction :
· Toxicity to reproduction:
7601-54-9 trisodium orthophosphate

Oral NOAEL - mg/kg bw/day (rat) (OECD 422) NOAEL not identified

· Teratogenicity :
7601-54-9 trisodium orthophosphate

Oral NOAEL > 370 mg/kg bw/day (rat)

· Potential health effects :
· Inhalation :

Inhalation of dust will produce irritation to gastrointestinal or respiratory tract, characterized by burning, sneezing and coughing.

Severe over-exposure can produce lung damage, choking, unconsciousness or death.

· Primary irritant effect:
· on the skin:

Caustic effect on skin and mucous membranes.

Skin contact can produce inflammation and blistering.

The amount of tissue damage depends on length of contact.

· on the eye:

Strong irritant with the danger of severe eye injury.

Inflammation of the eye is characterized by redness, watering, and itching.

Eye contact can result in corneal damage or blindness.

· by ingestion: May cause irritation of the digestive tract and may cause purging.

· Sensitization: No sensitizing effects known.

· Additional toxicological information:
· Carcinogenic categories
· IARC (International Agency for Research on Cancer)

Substance is not listed.

· NTP (National Toxicology Program)

Substance is not listed.

· OSHA-Ca (Occupational Safety & Health Administration)

Substance is not listed.

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12 Ecological information

· **Aquatic toxicity:**

· **Short- term toxicity :**

7601-54-9 trisodium orthophosphate

EC50/3 hr. (static) > 1000 mg/lit. (activated sludge) (OECD 209)

EC50/48 hr. (static) > 100 mg/lit (Daphnia magna)

EC50/72 h. (static) > 100 mg/lit (algae) (OECD 201)

LC50/96 h (static) > 100 mg/lit (fish) (OECD 203)

· **Persistence and degradability** No further relevant information available.

· **Bioaccumulative potential** No further relevant information available.

· **Mobility in soil** No further relevant information available.

· **Ecotoxicological effects:**

· **Remark:**

The product does not contain heavy metals in concentrations of concern for waste water.

The product does not release nitrogen which can contribute to eutrophication.

· **Behavior in sewage processing plants:**

· **Remark:**

Incidental down-the-drain disposal of small quantities of product will not affect the performance of wastewater treatment systems.

· **Additional ecological information:**

· **General notes:**

Water hazard class 1 (Assessment by list): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **Other adverse effects** No further relevant information available.

13 Disposal considerations

· **Waste treatment methods**

· **Recommendation:**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Any disposal practice must be in compliance with all local and national laws and regulations. Do not dump into any sewers, on the ground, or into any body of water.

Contact manufacturer for recycling information.

Contact waste processors for recycling information.

· **Uncleaned packagings:**

· **Recommendation:**

Disposal must be made according to official regulations.

Packaging can be reused or recycled after cleaning.

Packagings that cannot be cleansed are to be disposed of in the same manner as the product.

· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

· **Special precautions :**

Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

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14 Transport information

· UN-Number	
· DOT, ADR, ADN, IMDG, IATA	Void
· UN proper shipping name	
· DOT, ADR, ADN, IMDG, IATA	Void
· Transport hazard class(es)	
· DOT, ADR, ADN, IMDG, IATA	
· Class	Void
· Packing group	
· DOT, ADR, IMDG, IATA	Void
· Environmental hazards:	
· Marine pollutant:	No
· Special precautions for user	Not applicable.
· Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	Keep separated from foodstuffs.
· UN "Model Regulation":	-

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Sara**

· **Section 355 (extremely hazardous substances):**

Substance is not listed.

· **CERCLA Hazardous Substances**

Substance is not listed.

· **Hazard Communication Standard (HCS)**

Substance is not listed.

· **Section 313 (Specific toxic chemical listings):**

Substance is not listed.

· **TSCA (Toxic Substances Control Act):**

Substance is listed.

· **Clean Air Act – Hazardous Air Pollutants (HAP)**

Substance is not listed.

· **Clean Water Act – Priority Pollutants (PP)**

Substance is not listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**

Substance is not listed.

· **Chemicals known to cause reproductive toxicity for females:**

Substance is not listed.

· **Chemicals known to cause reproductive toxicity for males:**

Substance is not listed.

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· Chemicals known to cause developmental toxicity:
Substance is not listed.
· Cancerogenity categories
· EPA (Environmental Protection Agency)
Substance is not listed.
· TLV (Threshold Limit Value established by ACGIH)
Substance is not listed.
· NIOSH-Ca (National Institute for Occupational Safety and Health)
Substance is not listed.
· Product related hazard informations:
The product has been classified and marked in accordance with directives on hazardous materials.
· Hazard symbols:
Xi Irritant
· Risk phrases:
36/37/38 Irritating to eyes, respiratory system and skin.
· Safety phrases:
26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
37 Wear suitable gloves.
60 This material and its container must be disposed of as hazardous waste.
· Chemical safety assessment: A Chemical Safety Assessment has been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Department issuing SDS: Product safety department.
· Contact: Mr. Kwok
· Date of preparation / last revision 09/29/2014 / -
· Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

NOAEL : Non Observed Adverse Effects Level

LOAEC : Lowest Observable Adverse Effect Concentration

EC50 : Maximal effective concentration, 50 percent

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

· * Data compared to the previous version altered.

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