

Phosphorous Acid Safety Data Sheet

(MSDS)

Section 1. Chemical product and company identification

Product name: Phosphorous acid crystal

Synonyms name: Phosphonic acid, Phosphorous acid

Chemical

formula: H₃PO₃

Molecular weight: 82.00

Product code: 81502

Company Name: Yichang Chengkai Chemical Technology Co., Ltd

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SDS No: CK/SDS001

Revision date: October 26, 2024

Initial preparation date: October 26, 2021

Recommendations and restrictions Uses: mainly used in the production of phosphite, a stabilizer used in the plastics industry, synthetic fibers, water treatment agent, the production of organic phosphorus pesticides, etc., its use more widely. Limit for non-industrial purposes.



Section 2. Hazards

Emergency Overview: This product is nonflammable, corrosive, irritant, can cause the body burns; toxic to aquatic organisms.

Classification This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Corrosive to metals Category 1

Acute oral toxicity Category 4

Skin Corrosion/Irritation Category 1 A

Serious Eye Damage/Eye Irritation Category 1

Specific target organ toxicity (single exposure) Category 3

Target Organs - Respiratory system.

Label Elements

Signal Word

Danger

Hazard Statements

May be corrosive to metals

Harmful if swallowed

Causes severe skin burns and eye damage
May cause respiratory irritation



Precautionary Statements

Prevention

Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Do not breathe dust/fume/gas/mist/vapors/spray
Wear protective gloves/protective clothing/eye protection/face protection
Use only outdoors or in a well-ventilated area
Keep only in original container

Response

Immediately call a POISON CENTER or doctor/physician

Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

Skin

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower Wash contaminated clothing before reuse Eyes IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

Ingestion

Rinse mouth

Do NOT induce vomiting

Spills

Absorb spillage to prevent material damage

Storage

Store locked up

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

Store in corrosive resistant polypropylene container with a resistant liner

Store in a dry place

Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

None identified

Section 3.Part Composition / information

☒ substance ☐ mixture

Hazardous Ingredients	Concentration	CAS No.
Phosphorous acid crystal	98.5%	13598-36-2

Technical data

Specification

Inspection items	The degree of the products
Main contents(counted with H ₃ PO ₃)	98.5%
Moisture	1,5%



Section 4.First aid measures

first aid:

- **Skin contact:** Remove contaminated clothing, rinse for at least 20 minutes with soap and water. With emollients or sterile cream applied on the skin, such as corrosion pollution caused burns, allergic symptoms, a large area of skin damage or continuous stimulation call a physician.
- **Eye contact:** Do not rub the eyes, do not let the victims wipe the eyes or keeping eyes closed, eyelids apart, immediately and thoroughly washed at least 15 minutes with saline or water, remove contact lenses, seek medical advice.
- **Inhalation:** from the scene to fresh air, if inhaled prohibit the use mouth resuscitation if breathing is difficult, oxygen immediately. Medical treatment.
- **Ingestion:** Do not induce vomiting. Never give an unconscious person anything by mouth. If the patient is conscious, gargle with saline or water, drinking 2-4 full glass of milk or egg white. Seek medical advice.

Acute and late effects and main symptoms: eye redness, swelling, pain and tears; skin irritation and burns; Inhalation may cause coughing, chest tightness.

Section 5.Fire-fighting measures

Explosion Hazards: Corrosive. Thermal decomposition produces toxic phosphine gas.

Fire fighting methods and extinguishing agent: mist of water, carbon dioxide, foam, powder, sand.

Fire precautions and measures: Use water spray to spray cooling container, with plenty of water extinguishing

Section 6.Part VI ACCIDENTAL

Worker protective measures, protective equipment and emergency procedures: isolation leakage polluted area, located around the warning signs,Recommended emergency personnel wearing gas masks, chemical protective clothing to wear. Do not spill direct contact with the clean-shovel collection in a dry Clean covered containers, adding a lot of water in small amounts, adjusted to neutral, then add the wastewater system. You can also use a lot of water rinse, diluted Add Water Wastewater System. If large spills, recycling or waste processed sound.

Environmental precautions: Prevent spillage or firefighting waste water into the aquatic environment.

Leak accommodating chemicals and disposal of material removal method used: with the clean-shovel collection in a dry clean

Clean covered containers. Recycling or collection shipped to the waste disposal sites. Water will leak to mop clean.

Prevent secondary harm precautions: do not produce secondary hazards.

Section 7. HANDLING AND STORAGE

Handling Precautions: open operation, full ventilation. The operator must go through specialized training, strict adherence to rules. The proposed operating personnel Wear protective equipment specified. When moving to light light unloading, prevent damage to packaging and containers.

Storage: sealed containers, stored in a cool, dry, well-ventilated area. With alkali, volatile blowing agent Stored separately. Avoid direct sunlight. Packing seal, not in contact with air. Packing and handling operations should pay attention to personal protection. When moving to light light unloading, prevent damage to packaging and containers. Storage areas should be equipped with the appropriate variety and quantity of fire equipment, spill response equipment and materials suitable host. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls / personal protection

MAC (mg/m³) : Not setting standards

PC-TWA (mg/m³) : Not setting standards

PC-STEL (mg/m³) : Not setting standards

TLV-C (mg/m³) : Not setting standards

TLV-TWA (mg/m³) : Not setting standards

TLV-STEL (mg/m³) : Not setting standards

Biological limit: Not available

Monitoring Methods: Not available

Engineering controls: Open operation, full ventilation. Provide safety shower and eyewash equipment.

Respiratory protection: its possible exposure to vapor, should wear self-absorption filter type mask (full cover). Emergency rescue or evacuation, it is recommended to wear self-contained breathing apparatus.

Eye protection: Dai Jingguan party standards testing and approval of safety glasses. You can not wear contact lenses during operation.

Skin and body protection: wear clothes tape corrosion, acid and water shoes to wear protective clothing to get professional approval. Avoid contact with skin. Use contaminated clothing before washing again.

Hand protection: Wear rubber gloves acid-resistant gloves must be inspected prior to use

Section 9. Physical and chemical properties

Appearance: white crystalline solid.

PH value: Acidity

Boiling point(°C): > 180-200°C

Melting point/freezing point(°C): 73.6

(softening point)

Density: 1.65g/cu cm(25°C)



Relative density of steam(air=1): Not setting standards

Heat of combustion(kJ/mol): Not setting standards

Critical pressure(MPa): Not setting standards

Flash point (°C):

Decomposition temperature(°C): 200°C

Lower explosive limit[% (V/V)]:

Odor thresholds : Not setting standards

Flammability: This product is flammable.

Solubility: soluble in water, ethanol.

Relative density(water=1): 1.65

Saturated vapor pressure(kPa): Not setting standards

Critical temperature(°C): Not setting standards

N-Octanol/water partition constant: Not setting standards

Ignition temperature(°C): Not setting standards

Upper explosive limit[% (V/V)]: Not setting standards

Evaporation rate: Not setting standards

Section 10. Stability and reactivity

Dangerous reaction stability and specific conditions that may occur: stored at room temperature in a sealed, original containers stable. Stable under normal handling, use and transportation conditions.

Incompatibility: bases, waving and foaming agents.

Conditions to avoid: Avoid contact with heat, air contact to avoid.

Hazardous Polymerization: Will not polymerize. **Hazardous**

decomposition products: phosphine, phosphine.

Intended use of chemicals and foreseeable misuse Uses: mainly used for the production of phosphite, a stabilizer used in the plastics industry, synthetic fibers, water treatment agent, production and other organophosphorus pesticides, which uses a wider.

Section 11. Toxicological Profile

Acute toxicity: Not available

Skin irritation or corrosion: Slightly irritating to the skin.

Eye irritation or corrosion: Mild irritation to the eyes, but not enough to grade.

Respiratory or skin sensitization: patch test confirmed susceptible may cause skin irritation.

Germ cell mutagenicity: No information available.

Carcinogenicity: No information available.

Reproductive toxicity: Not available

Specific target organ toxicity - single exposure: Not available.

Specific target organ toxicity - repeated exposure: Not available

Inhalation Hazard: No information available.



Section 12. ECOLOGICAL INFORMATION

Ecotoxicity: No information available.

Persistence and degradability: Not available

Bioaccumulation potential: Not available

Mobility in soil: No information

Section 13. DISPOSAL

Waste Disposal Method: In accordance with the requirements of national and local disposal regulations, or with the vendor, contact the manufacturer to determine the processing method.

- **Products:** during and after disposal by safety landfill method.

- **Unclean packaging:** the empty containers returned to the manufacturer or according to local regulations.

Waste Note: Before disposal of the national and local regulations, pay attention to prevent water pollution.

Section 14. TRANSPORT INFORMATION

UN number (UN number): 2834

UN shipping name: PHOSPHOROUS ACID

UN Hazard Classification: 8

Packaging Category: III

EMS Number: F-A,S-B



Package mark:

Packaging: in strict accordance with "the International Maritime Dangerous Goods Code" for packaging, plastic bags packet; double endometrial alone reached tightly closed dressing requirements, outer bags double endometrial individually wrapped packets tightly closed, clean appearance.

Marine pollutant (Yes / No): No

Transportation Note: Transport should be strictly followed, "the International Maritime Dangerous Goods Code" and "sea transport of dangerous goods packaging safety norms", packaging and handling operations should pay attention to personal protection, when complete packaging to shipment, handling should be conservative during transport To ensure that the container does not leak, did not fall, do not fall, no damage, when loading and unloading gently, maintain packaging integrity, packaging to prevent breakage, non-edible chemicals mixed with alkali transport, transport vehicles should be equipped with emergency leak equipment, transport process should be anti-exposure, rain, high temperature. Stopovers should be away from fire, heat, hot zone. According to the provisions road transport routes, not in residential areas and densely populated areas.

Section 15. Regulatory Information

REGULATORY INFORMATION: The following laws, regulations and standards, the safe use of chemicals, storage, transportation, handling, classification and marking

Etc. are made by the appropriate provisions: (Adopted at the twenty-eighth session of the Ninth National People's Congress June 29, 2002) Production Safety Law of People's Republic of China; People's Republic of China Occupational Disease Prevention Law (December 31, 2011 Eleventh National Standing Committee 24th meeting "Decision on Revising <People's Republic of China Occupational Disease Prevention Law" "modified. Implemented since December 31, 2011. "??

Environmental Protection Law of People's Republic of China (the Eleventh National People's Congress at the 28th Meeting amendment September 30, 2012);
Dangerous Chemicals Regulations (State Council Decree No. 591);
Safe production license regulations (State Council Decree No. 397).

Section 16. OTHER INFORMATION

Latest Revision Date: October 26, 2021

Modify Description: according to "Material Safety Data Sheet Content and order" (GB / T16483-2008) standards, the former version of SDS be revised.

Acronyms Description:

MAC: refers to the work place, in one working day, any time the concentration of toxic chemicals should not be exceeded.

PC-TWA: refers to the time specified weights 8h workday, Permissible Exposure 40h average work week.

PC-STEL: refers to compliance with PC-TWA premise allows short (15min) exposure concentrations.

TLV-C: instantaneous nor exceed the limit. It is devoted to certain substances, such as gas or acute irritant dominated
Substances regulations.

TLV-TWA: refers to work eight hours a day or 40 hours of work time-weighted average concentration of a week, at this concentration trans

Re-exposure to almost all workers do not cause adverse effects.

TLV-STEL: is to ensure compliance with TLV-TWA case, allow workers continuous contact with the maximum concentration for 15min. This concentration should not exceed four times each weekday, and the two contacts separated by at least 60min.

Disclaimer: In this SDS truly comprehensive provides all the relevant information, but we can not guarantee its absolute widely And accuracy. The SDS only for those appropriately trained personnel and the use of the safety precautions of the product provides information on the product, to obtain personal user of the SDS, in particular conditions of use, you must make an independent judgment of suitability of this SDS. In special occasions, the use of this SDS caused injury, the companies assume no liability.

Disclaimer: All relevant information is fully and truly provided in this SDS, but we cannot guarantee its absolute universality and accuracy. This SDS only provides safety prevention information for those who have received appropriate professional training and use the product.

Individual users who obtain the SDS must make independent judgments on the applicability of the



SDS under special conditions of use. In special use situations, the company will not be responsible for any damage caused by the use of this SDS.

Reference: Safety Technical Manual of Hazardous Chemicals, 3rd edition, Chemical Industry Press, 2017; Production Safety Law of the People's Republic of China; Law of the People's Republic of China on the Prevention and Control of Occupational Diseases; Environmental Protection Law of the People's Republic of China; Regulations on the Safety Management of Hazardous Chemicals; Regulations on Work Safety License, etc.

Filling department: Safety and Environmental Protection Department

Data review department: Production Department

