

Safety Data Sheet

1. IDENTIFICATION

Phosphric Acid (BugBUST 4324)

Use: Fertilizer production. Surface treatment of metals / rust removal. pH regulation. Water treatment. Cleaning of process equipment for food production. Disinfectant Co-Reactant

Company: Chemical Research Products Industrial Sales Incorporated
475 J.P Rizal St., Mahabang Parang, Sta. Maria, Bulacan

Telephone No.: (044) 703 6998

Website: www.chemicalresearchph.com

Emergency Information

Chemical Research Technical Tel. No.: (02) 687-6541

2. HAZARD(S) IDENTIFICATION

GHS Classification: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)
Corrosive to Metals (Category 1), H290
Skin Corrosive (Category 1B), H314
Specific Target Organ Toxicity (Single Exposure) (Category 3), H335
Serious Eye Damage (Category 1), H318
Aquatic Acute (Category 2), H401

Label Element:



Signal Word: **Danger**

Hazard Statement: May be corrosive to metals
Harmful if swallowed.
May cause respiratory irritation

Causes serious eye damage.
Causes severe skin burns and eye damage.
Toxic to aquatic life.

Precautionary Statements

- Prevention:** Keep away from heat. Keep/Store away from clothing and other combustible materials. Take any precaution to avoid mixing with combustibles. Use only outdoors or in a well-ventilated area. Do not breathe mist or vapor. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Do not eat, drink or smoke when using this product. Avoid release to the environment
- Response:** If SWALLOWED: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. If in EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a poison center/doctor. If exposed: Call a poison center/doctor. Collect spillage.
- Storage:** Store locked up. Store in a well-ventilated place. Keep container tightly closed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS No.	Percentage
Phosphoric Acid	(7664-38-2)	53% min.

4. FIRST-AID MEASURES

- Eyes:** Immediately flush with plenty of lukewarm water for up to 20 minutes. Remove any contact lenses and open eyelids wide apart. Continue rinsing. Take care not to raise contaminated water into affected eye. Get medical attention immediately.
- Skin:** Take off immediately all contaminated clothing. Immediately flush skin with plenty of water. Wash contaminated clothing before reuse.
- Ingestion:** Never give anything by mouth if victim is rapidly losing consciousness, or if unconscious or convulsing. Have victim rinse mouth thorough with water. Have victim drink one cup (240-300ml 8-10 oz) to dilute material in stomach. Do not induce vomiting. If vomiting occurs naturally, rinse mouth and repeat administration of water. If breathing has stopped, trained personnel should begin artificial respiration or, if the heart has stopped cardiopulmonary resuscitation (CPR) immediately. Get medical attention immediately.
- Inhalation:** Remove source of contamination or move victim to fresh air. If breathing has stopped, trained personnel should begin artificial respiration or, if the heart has stopped start CPR (cardiopulmonary resuscitation). Get medical attention immediately.

Most important symptoms/effects, acute and delayed: Irritation, burning, coughing, shortness of breath, hoarseness, laryngitis, nausea, vomiting, diarrhea. Corrosive. Harmful if swallowed, inhaled, or absorbed through the skin. Causes burns to the eyes, skin, respiratory tract, and gastrointestinal tract. May enter lungs if swallowed or vomited. Liquid and vapors are corrosive. May cause tissue damage. Prolonged or repeated exposure may cause mutagenic effects.

General information: Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

5. FIRE-FIGHTING MEASURES

- Extinguishing Media:** Non-flammable. Material will not burn. Use an extinguishing agent suitable for the surrounding fire.
- Exposure Hazard:** In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Reacts violently with water. Will react with water or steam to produce heat and corrosive fumes. Attacks many metals producing extremely flammable hydrogen gas which can form explosive mixtures with air. Flammable concentrations of vapor may accumulate in the headspace of containers.
- Protective Equipment:** Wear full protective clothing and self-contained breathing apparatus (scba) exposed to vapors or products of combustion.
- Advice for Firefighters:** Evacuate area. Remove all sources of ignition. In case of fire: Stop leak if safe to do so. Move combustibles out of path of advancing pool if you can do so without risk. Move containers from fire area if you can do so without risk. Fight fire from upwind to avoid exposure to combustion products. In case of fire and/or explosion do not breathe fumes.

6. ACCIDENTAL RELEASE MEASURES

- Personal Precaution:** Immediately evacuate personnel to safe areas. Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Local authorities should be advised if significant spillages cannot be contained.
- Environmental Precaution:** Cover the drains to prevent the product from entering the environment. If product contaminates rivers and lakes or drains inform respective authorities.
- Clean up Methods:** Stop leak if without risk. Move containers from spill area. Neutralize acids by applying basic substances (soda ash or lime) or use an acid spill kit. Absorb with

an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

7. HANDLING and STORAGE

- Handling:** Put on appropriate personal protective equipment. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Handle the material in a fume hood/cupboard or under local exhaust ventilation. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Keep away from alkalis. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Storage:** Store in accordance with local regulations. Store in a corrosion resistant container with a resistant inner liner. Store locked up. Separate from alkalis. Attacks many metals producing extremely flammable hydrogen gas which can form explosive mixtures with air. Flammable concentrations of vapor may accumulate in the headspace of containers. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers.
- Incompatible Materials:** Avoid contact with combustibles and reactive materials.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

- Personal Protection:** RUBBER BOOTS, GLOVES, APRON, FACE SHIELD.
The following are recommendations only. It is the responsibility of the employer / user to conduct a hazard assessment of the process in which this product being used and determine the proper engineering controls and PPE for their process. Additional regulatory and safety information should be sought from local authorities and, if needed, a professional industrial hygienist.
- Respiratory Protection:** In case of insufficient ventilation, wear suitable respiratory equipment. A NIOSH/MSHA approved air-purifying respirator with the appropriate chemical cartridges or a positive-pressure, air-supplied respirator may be used to reduce exposure. Use a positive-pressure air-supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air-purifying respirators may not provide adequate protection. Respirators should be selected based on the form and concentration of contaminants in air, and in accordance with OSHA (29 CFR 1910.1200). Seek advice from respiratory protection specialists.

Eye Protection:	Wear safety glasses with side shields (or goggles) and a face shield. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.
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.
Other Personal Protection	
Data:	Where contact is likely, wear chemical-resistant gloves, a chemical suit, rubber boots, and chemical safety goggles plus a face shield. Wear chemical protective equipment that is specifically recommended by the manufacturer. It may provide little or no thermal protection. Eye wash facilities and emergency shower must be available when handling this product.
Hygiene Measures:	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

9. PHYSICAL and CHEMICAL PROPERTIES

Physical State:	Liquid
Appearance:	Colourless
Odor:	Odorless
Odor threshold:	No data available
pH:	0.2 – 1.0
Specific gravity:	1.00 – 1.20
Melting point/range (°C):	< -6.7 °C (< 20 °F)
Boiling point/range (°C):	131 - 193 °C (268 - 380 °F)
Vapor Density (Air=1)	No data available
Vapor Pressure:	1 - 6 mm Hg at 25 °C (77 °F)
Water solubility (g/L):	Soluble.
Viscosity:	Kinematic (room temperature): 0.057 cm ² /s (5.7 cSt)

10. STABILITY and REACTIVITY

Conditions to Avoid:	This product should be stored away from oxidizing materials and strong bases. Refer to NFPA 400 Hazardous Materials Code for further information on the safe storage and handling of hazardous materials. Protect from moisture. Avoid high temperatures.
-----------------------------	---

- Chemical Stability:** Material is stable under normal conditions.
- Materials to Avoid:** Attacks many metals producing extremely flammable hydrogen gas which can form explosive mixtures with air. Reactive or incompatible with the following materials: alkalis metals
- Hazardous Decomposition:** Under conditions of fire this material may produce: Oxides of phosphorus; Phosphine; Sulphur oxides.

11. TOXICOLOGICAL INFORMATION

- Routes of Exposure:** Inhalation, ingestion, skin contact, eye contact.
- Acute Effects:** Corrosive. Harmful if swallowed, inhaled, or absorbed through the skin. Causes burns to the eyes, skin, respiratory tract, and gastrointestinal tract. May enter lungs if swallowed or vomited. Liquid and vapors are corrosive. May cause tissue damage.
- Chronic Effects:** Prolonged or repeated exposure may cause mutagenic effects.
- Toxicological Data:** Water: Not applicable.
Phosphoric Acid: LD50 Oral, Rat: 1530 mg/kg
LD50 Dermal, Rabbit: 2740 mg/kg
Corrosive to skin and eyes based on animal data. May cause mutagenic effects based on animal data.
- Symptoms of Exposure:** Irritation, burning, coughing, shortness of breath, hoarseness, laryngitis, nausea, vomiting, diarrhea.
- Carcinogenic Effects:** This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

12. ECOLOGICAL INFORMATION

Toxicity

Product	Species	Test Results	Exposure	
Phosphoric Acid (CAS 7664-38-2)				
Acute	EC ₅₀	Daphnia - Daphnia magna	105 ppm Fresh water	48 hours
Acute	LC ₅₀	Fish - Lepomis macrochirus	60 ppm Fresh water	96 hours
Acute	LC ₅₀	Fish - Oncorhynchus mykiss	87 ppm Fresh water	96 hours

Conclusion/Summary: May be harmful to the environment if released in large quantities. Harmful to aquatic life. Excessive nutrient runoff to a body of water may result in eutrophication.

- Persistence and Degradability:** Not persistent. Readily biodegradable
- Bioaccumulative Potential:** No specific data available on this product.
- Mobility in the soil:** No specific data available on this product.
- Other adverse effects:** No known significant effects or critical hazards.

13. DISPOSAL CONSIDERATION

- Disposal of wastes:** Dispose of this material and its container to hazardous or special waste collection point. Minimize exposure to product waste. Do not dispose unused waste down drains or into sewers. All wastes must be handled in accordance with local, state, and federal regulations.
- Contaminated Packaging:** Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.
- Clean up:** Do not touch spilled material. Prevent material from entering sewers or confined place. Shovel into clean, dry, labeled containers. Flush area with water. Care should be taken while handling contaminated material.

14. TRANSPORT INFORMATION

TDG

UN number	UN 1805
UN proper shipping name	Phosphoric Acid, solution
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Packing group	III
Environmental hazards	No
ERG Code	154
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IATA

UN number	UN 1805
UN proper shipping name	Phosphoric Acid, solution
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Packing group	III
Environmental hazards	No
ERG Code	154
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IMDG

UN number	UN 1805
UN proper shipping name	Phosphoric Acid, solution
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Packing group	III
Environmental hazards	No
ERG Code	154
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

15. REGULATORY INFORMATION

Chemical Inventory Status - Part 1

<u>Ingredient</u>	<u>TSCA</u>	<u>EC</u>	<u>Japan</u>	<u>Australia</u>
Phosphoric Acid (7664-38-2)	Yes	Yes	Yes	Yes
Water (7732-18-5)	Yes	Yes	Yes	Yes

Chemical Inventory Status - Part 2

<u>Ingredient</u>	<u>Korea</u>	<u>DSL</u>	<u>NDSL</u>	<u>Phil.</u>
Phosphoric Acid (7664-38-2)	Yes	Yes	No	Yes
Water (7732-18-5)	Yes	Yes	No	Yes

Federal, State & International Regulations - Part 1

<u>Ingredient</u>	<u>RQ</u>	<u>TPQ</u>	<u>List</u>	<u>Chemical Catg.</u>
Phosphoric Acid (7664-38-2)	1000	1000	Yes	No
Water (7732-18-5)	No	No	No	No

Federal, State & International Regulations - Part 2

<u>Ingredient</u>	<u>CERCLA</u>	<u>261.33</u>	<u>8(d)</u>
Phosphoric Acid (7664-38-2)	1000	No	No
Water (7732-18-5)	No	No	No

U.S. Federal Regulations:

OSHA: This product is considered a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Inventory: All components of this product are on the U.S. TSCA Inventory.

U.S. EPCRA (SARA Title III):

Section 302: No information found.

Sections 311/312:

Hazard Category

311 – Hazardous Chemical

Immediate Hazard

Delayed Hazard

Fire Hazard

Pressure Hazard

Reactivity Hazard

List (Yes/No) Section

Yes

Yes

Yes

No

No

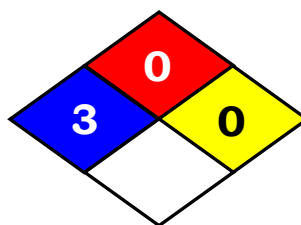
No

16. OTHER INFORMATION

HMIS

HEALTH	3
FLAMMABILITY	0
REACTIVITY	0
PERSONAL PROTECTION	H

NFPA



Relevant classification and H statements (number and full text):

H290 Corrosive to Metals

H314 Skin Corrosive

H335 Specific Target Organ Toxicity (Single Exposure)

H318 Serious Eye Damage

H401 Aquatic Acute

Precautionary phrases: Danger!

References

Hazardous Products Act and Regulations, current revision at time of SDS preparation, Health Canada;
Domestic Substances List, current revision at time of SDS preparation, Environment Canada;

29 CFR Part 1910, current revision at time of SDS preparation, U.S. Occupational Safety and Health Administration;
40 CFR Parts 1-799, current revision at time of SDS preparation, U.S. Environmental Protection Agency;
49 CFR Parts 1-199, current revision at time of SDS preparation, U.S. Department of Transport;
NFPA 400, National Fire Codes, National Fire Protection Association, current edition at time of SDS preparation;

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product. Employers should use this information only as a supplement to other information gathered by them and should make independent judgment of suitability of this information to ensure proper use and protect the health and safety of employees.