

# MATERIAL SAFETY DATA SHEET

Revision #: 06

## Section 1 - Product Identification & Use

Product Name: **Phosphoric Acid 75%**  
WHMIS Classification: Class E, Corrosive Liquids  
TDG Classification: Phosphoric acid solution Class 8, UN 1805, III  
Manufacturer: Advance Chemicals Ltd.  
2023 Kingsway Ave  
Port Coquitlam, BC V3C 1S9  
Phone: (604) 945-9666  
Fax: (604) 945-9617  
Emergency phone: CANUTEC 24 hrs (613) 996-6666

## Section 2 - Hazardous Ingredients

Hazardous Components	%(w/w)	C.A.S. No.	LD <sub>50</sub> & LC <sub>50</sub>
Phosphoric acid	60-100	7664-38-2	1530 mg/kg (oral, rat)

## Section 3 - Physical Data

Physical state: liquid      Boiling point: 135°C  
Liquid density: 1.573g/mL      Freezing point: -17.5°C  
pH: 0.85 @ 20°C      Solubility in water: 100%  
Vapour pressure: 5.65-2.16 mmHg @ 20°C  
Evaporation rate: no data

**Odour & Appearance:** The product is a clear liquid solution. There may be a slight acid like odour above the open liquid.

## Section 4 - Fire or Explosion Hazard

**Flammability:** The product is not considered to be flammable.

**Extinguishing media:** Use an extinguishing media for surrounding the fire, or all purpose foam by manufacturer's recommended techniques for large fires. Use water to cool fire exposed containers to prevent vapour build-up and rupture. Water may also be used to flush spills away from dangerous exposures.

**Hazardous Combustion Products:** Combustion may produce toxic phosphorous oxide fumes. Wear self contained breathing apparatus.

## Section 5 - Reactivity Data

**Stability:** Stable.

**Incompatible substances:** Metals, caustics like NaOH, KOH, sulphides, cyanides, fluorides, carbides, silicates and strong oxidizing agents.

**Polymerization:** Will not occur.

**Conditions to Avoid:** Contact with metals produces hydrogen gas, which can form flammable or explosive mixtures in air. Will generate heat when mixed with alkalis. Reaction with sulphides, phosphides, cyanides, acetylides, fluorides, silicides, and carbides, releases flammable and/or poisonous gasses. May spatter upon contact with water.

**Hazardous Combustion Products:** Combustion may produce toxic phosphorous oxide fumes. Wear self contained breathing apparatus.

## Section 6 - Toxicological Properties

**Acute Toxicity:** There is no evidence that phosphorous poisoning can result from contact with phosphoric acid. The chance of pulmonary edema resulting from a mist or spray inhalation is very remote. (From China National Chemicals Import Export Corp., 1991)

**Skin contact:** Burning, inflammation, blisters.

**Eye contact:** Burning, watering.

**Inhalation:** Irritation of mucous membranes, watering of eyes, difficulty breathing, salivation, nausea.

**Ingestion:** Pain in swallowing, intense thirst, abdominal pain, nausea, concentrated solutions may be fatal.

## Section 7 - Preventative Measures

**Personal Protective Equipment:** Avoid contact with skin and eyes. Wear chemical protective gloves, goggles and face shield, rubber apron and boots. Eye wash fountains and safety shower facilities should be provided nearby for emergency use.

**Respiratory protection:** For acid mist, use a high efficiency particulate respirator equipped with a full face piece. For concentrations above 50 mg/m<sup>3</sup>, use a continuous supplied air line respirator with a safety hood.

**Ventilation Requirements:** This product should be used in a well ventilated area at all times. If the phosphoric acid solution is to be heated or a mist will be generated during product application, then local exhaust ventilation will be necessary.

**Action to take for spills & leaks:** Wear chemical protective clothing, rubber gloves and suitable respiratory protection. Small spills should be wiped up with absorbent material and disposed of in government approved waste containers. The spilled product can be neutralized with a soda ash or baking soda and wet down with a little water to form slurry. The spill area may then be flushed with large quantities of water. Larger spills should be contained by diking with sand, soil or other absorbent, non-combustible material, then transferred into approved waste containers for proper disposal. Keep product out of sewers, storm drains, surface run-off water and soil. Restrict access to non-protected personnel. Comply with all government regulations on spill reporting, and handling and disposal of waste.

**Disposal methods:** Dispose of contaminated product and materials used in cleaning up spills or leaks in a manner approved for this material. Consult appropriate federal, provincial and local regulatory agencies to ascertain proper disposal procedures.

**Note:** Empty containers can have residues, gasses and mists, and are subject to proper waste disposal as mentioned above.

**Storage & Handling Precautions:** Warning, harmful or fatal if swallowed. Causes eye, skin and respiratory irritation. Avoid contact with eyes and repeated contact with skin and clothing. Do not ingest. Keep away from sources of heat and open flame. Keep container tightly closed when not in use. Store upright in a cool, dry, well ventilated place away from incompatible materials. Do not use pressure to empty container. Wash thoroughly after handling. Use with adequate ventilation. Tanks must be grounded and ventilated.

**Repair and Maintenance Precautions:** Do not cut, grind, weld or drill in, on or near this container.

## Section 8 - First Aid Measures

**If inhaled:** Remove victim to fresh air. Give artificial respiration if not breathing. Get immediate emergency medical attention.

**In case of eye contact:** Immediately flush eyes with clean water for at least fifteen (15) minutes, lifting the upper and lower eye lids occasionally. Get immediate emergency medical attention.

**In case of skin contact:** Immediately flush skin with plenty of clean running water for at least fifteen (15) minutes. Remove contaminated clothing and shoes. Wash and launder clothes before re-use. If irritation persists after washing, get immediate medical attention.

**In case of ingestion or swallowing:** If victim is conscious and medical attention is not immediately available, dilute stomach contents by giving large amounts of water or milk. Then give milk of magnesia or aluminum hydroxide gel. DO NOT INDUCE VOMITING. Never give anything by mouth to an unconscious victim. Get immediate emergency medical attention.

## Section 9 - Preparation Information

Advance Chemicals Limited expressly disclaims all expressed or implied warranties of merchantability and fitness for a particular purpose with respect to the product provided. The information contained herein is offered only as a guide to the handling of this specific product, and has been prepared in good faith by technically knowledgeable personnel. This M.S.D.S. is not intended to be all inclusive, and the manner and conditions of use may involve other and additional considerations.

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