

SAFETY DATA SHEET

According to OSHA Hazard Communication Standard
29 CFR 1910.1200 (HAZCOM 2012 - GHS)

1. Identification of the substance & the company

Product identifier	CWT-375
Synonym(s)	Monophosphoric acid, orthophosphoric acid
Supplier	Chemstream, Inc. 511 Railroad Ave Homer City, PA 15748 724-915-8388
Emergency Telephone	Chemtrec: (800) 424-9300

2. Hazards identification

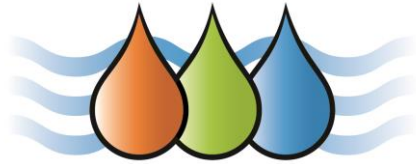
GHS classification	Met. Corr 1	H290 May be corrosive to metals
	Acute Tox. 4	H302 Harmful if swallowed
	Skin Corr. 1B	H314 Causes severe skin burns and eye damage
	Eye Damage 1	H318 Causes serious eye damage



Signal Word	DANGER
Hazard statements	H290 - May be corrosive to metals H302 - Harmful if swallowed H314 - Causes severe skin burns and eye damage
Precautionary statements	P260 - Do not breathe dust/fume/gas/mist/vapors/spray P280 - Wear protective gloves/protective clothing/eye protection/face protection P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower 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 P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting

3. Composition / information on ingredients

Components	CAS No.	Weight %
Phosphoric acid	7664-38-2	30 - 95



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4. First-aid measures

Eye contact	Holding the eyelids apart, flush eyes promptly with copious flowing water for at least 20 minutes. Get medical attention immediately.
Skin contact	Remove contaminated clothing. Wash skin thoroughly with mild soap and plenty of water for at least 15 minutes. Wash clothing before reuse. Get medical attention if irritation occurs.
Inhalation	In case of inhalation, remove person to fresh air. Keep him quiet and warm. Apply artificial respiration if necessary and get medical attention immediately.
Ingestion	If swallowed, wash mouth thoroughly with plenty of water. Get medical attention immediately.
	----- NOTE: Never give an unconscious person anything to drink ----- DO NOT INDUCE VOMITING

Most important symptoms and effects, acute or delayed

Harmful if swallowed
Causes severe skin burns and eye damage Causes serious eye damage

Notes to the physician	Treat symptomatically and supportively. If swallowed, gastric irrigation. Medical supervision for at least 48 hours
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5. Fire - fighting measures

Suitable extinguishing media

Use extinguishing media appropriate to surrounding fire conditions: Water spray, carbon dioxide (CO₂), dry chemical powder or appropriate foam.

Extinguishing media not to be used

Do not use water jet.

Unusual fire and explosion hazards

When heated to decomposition, may release poisonous and corrosive fumes of phosphorus oxides, Phosphoric acids

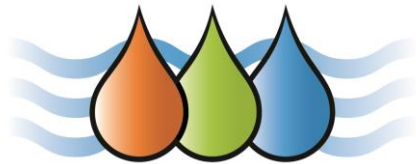
Fire fighting procedure

Fire fighters should wear full protective clothing and self-contained breathing apparatus (SCBA). Acid resistant clothing.

6. Accidental release measures

Personal precautions	Wear appropriate safety clothing and eye/face protection (see Section 8).
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Methods for cleaning up	Soak up with sand or other suitable absorbent and dispose of as solid waste. Collect in suitable and properly labeled containers. Ventilate area and wash spill site after material pickup is complete. Neutralize with lime or soda ash and flush
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with plenty of water.

Environmental precautions Prevent product from entering drains, ditches and rivers.

7. Handling and storage

Handling Keep containers tightly closed. Avoid bodily contact.

Storage Store in a dry, well-ventilated area away from incompatible materials (see "materials to avoid").

8. Exposure controls / personal protection

Exposure Limits :

Components	ACGIH-TLV Data	Korea OEL	OSHA (PEL) Data
Phosphoric acid 7664-38-2	1 mg/m ³ STEL: 3 mg/m ³	Not determined	1 mg/m ³

Ventilation requirements Ventilation must be sufficient to maintain atmospheric concentration below recommended exposure limit.

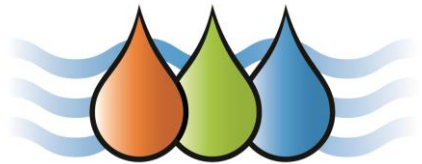
Personal protective equipment:

- **Respiratory protection** NIOSH/MSHA approved respiratory protection is recommended for use in airborne concentrations exceeding exposure limits.
A respiratory protection program meeting OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.
- **Hand protection** Protective gloves
- **Eye protection** Wear chemical goggles, a face shield, and if necessary, a full face respirator when conditions warrant or exceed the Occupation Exposure Limit. Refer to U.S. OSHA regulations 29 CFR 1910.133 or European Standard EN 166
- **Skin and body protection** Body covering clothes and boots.

Hygiene measures Do not eat, smoke or drink where material is handled, processed or stored. Wash hands thoroughly after handling and before eating or smoking. Safety shower and eye bath should be provided.

9. Physical and chemical properties

Appearance	syrupey liquid
Color	Colorless
Odor	Odorless.
Odor threshold	Not determined
pH	1 @ 20°C. (calculated)
Melting point/range	Not determined
Boiling point/range	75%: 135, 80%: 144, 85%: 154, 95%: 202 °C
Freezing point/range	75%: -17.5, 80%: 4.6, 85%: 21.1, 95%: 24.7 1°C
Flash point	>250°F Not flammable
Evaporation rate (ether=1)	Not determined
Flammability (solid, gas)	Not determined



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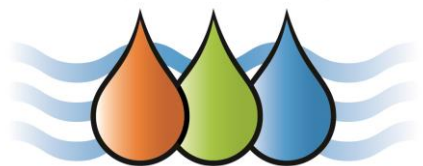
Vapor pressure	0.0285mmHg @ 20°C (acid 100%)
Density	1.575 g/cm ³ @ 20°C
Solubility:	
- Solubility in water	Completely miscible
Partition coefficient (n-octanol/water)	
Log Pow : -2. (calculated)	
Auto-ignition temperature	Not self-ignitable
Decomposition temperature	Not determined
Viscosity	12 mPas (25°C)
Ignition temperature	Not applicable
Explosive properties	Not explosive
Oxidizing properties	None

10. Stability and reactivity

Reactivity	No reactive hazards known/expected.
Stability	Stable under normal conditions
Possibility of hazardous reactions	Reacts with: alkalis, base metals forming hydrogen
Conditions to avoid	None.
Materials to avoid	Mild Steel and Aluminum. sulfides and sulfites alkalies, strong bases
Hazardous decomposition products	Phosphorus oxides.

11. Toxicological information

Toxicity	The following data refer to phosphoric acid 85%.
Acute toxicity:	
- Rat oral LD50	3500 mg/kg
- Rabbit dermal LD50	>1260 mg/kg
Skin corrosion/irritation	Causes severe skin burns
Serious eye damage/ irritation	Causes serious eye damage
Respiratory or skin sensitisation	Does not meet classification criteria
Mutagenicity	Phosphoric acid has produced no genetic changes in standard tests using bacterial cells
Carcinogenicity	Not established
Reproductive toxicity	No data.
Developmental toxicity	No data available
Specific Target Organ Toxicity (STOT) - Single exposure	No data



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Specific Target Organ Toxicity (STOT) - Repeat exposure No data

12. Ecological information

Aquatic toxicity	Phosphoric acid is practically nontoxic to one species of freshwater fish. No toxicity data was located for other freshwater species, algae, or Daphnia magna in a search of the available scientific literature
- 96 Hour-LC50, Fish	138 mg/L (Mosquitofish)
- 48 Hour-EC50, Daphnia magna	> 100 mg/L EC50 (72 h) > 100 mg/L (desmodesmus subspicatus)
- NOEC	56 mg/L (daphnia magna) 100 mg/L (desmodesmus subspicatus)
Bioaccumulative potential	Not expected to bioaccumulate.
Mobility in soil	No data
Note:	Does not meet the criteria for PBT or vPvB assessment (inorganic substance)

13. Disposal considerations

Waste disposal	Observe all federal, state and local environmental regulations when disposing of this material
Disposal of Packaging	Dispose of in a safe manner in accordance with local/national regulations.

14. Transportation information

UN No.	1805
IMDG	
Label: CORROSIVE (8)	
Packing Group: III	
Maximum net quantity per inner packaging: 30 ml	
Maximum net quantity per outer packaging: 1000 ml	

15. Regulatory information

USA	Reported in the EPA TSCA Inventory.
Canada	Listed in DSL
EU	Reported in EINECS
Australia	Listed in AICS
China	
- China inventory	Listed in IECSC



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Japan	Listed in ENCS Listed in ISHL
Korea	listed in KECI
Mexico	Listed in the National Inventory of Chemical Substances (INSQ).
New Zealand Inventory	Listed in NZIoC
Philippines	Listed in PICCS
Taiwan	Listed (TCSI)
Vietnam	Listed
Thailand	Listed

16. Other information

Although the information and recommendations set forth herein (hereinafter "information") are presented in good faith and believed to be correct as of the date hereof, we make no representations as to the completeness or accuracy thereof. Information is supplied to you upon the condition that the persons receiving the information will make their own determination as to its safety and suitability for their purposes prior to use. In no event will we be responsible for damages of any nature whatsoever resulting from the use of or reliance upon the information. In addition, we shall not be liable for any damage or injury resulting from abnormal use, from any failure to adhere to recommended practices or from any hazards inherent in the nature of the product.

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End of safety data sheet