

Section 1. Product and Company Identification

Product Name MIL-C-10578D Type 1

Parchem - fine & specialty chemicals

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EMERGENCY RESPONSE NUMBER
CHEMTEL

Toll Free US & Canada: 1 (800) 255-3924

All other Origins: 1 (813) 248-0585

Collect Calls Accepted

Section 2. Hazards Identification

Classification of the substance or mixture

Physical Hazards

Flammable Liquids: No hazard statement

Health Hazards

Acute Toxicity (Oral): Category 4 - Harmful if swallowed, in contact with skin, inhaled

Skin Corrosion/Irritation: Category 2 - Causes skin irritation

Serious Eye Damage/Irritation: Category 1 - Causes severe eye damage

Aspiration Hazard: Category 1 - May be fatal if swallowed and enters airways

GHS Label Elements

Pictograms:



Signal word: DANGER

Hazard and precautionary statements

Hazard Statements

H312 H332: Harmful in contact with skin or if inhaled

Precautionary Statements

P101+102+103: If medical advice is needed, have product container or label at hand. Keep out of the reach of children. Read label before use.

P202+270+280+281: Do not handle until all safety precautions have been read and understood.

Do not eat, drink or smoke when using this product.. Wear protective gloves/protective clothing/eye protection/face protection. Use personal protective equipment as required.

P301+330+331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to



do - continue rinsing

P501: Dispose of contents/container: Treatment, storage, transportation and disposal must be in accordance with Federal, State/Provincial and Local Regulations. Regulations may vary in different locations. Characterization and compliance with applicable laws are the responsibility solely of the generator. Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

Total VOC's: < 15%

Section 3. Composition / Information on Ingredients

Common Name MIL-C-10578D Type 1

COMPONENT	CAS NUMBER	CONCENTRATION
Phosphoric Acid	7664-38-2	60 – 80%
Glycol Ether EB	111-76-2	15 – 20%
Nonionic Surfactant	–	1 – 5%

Section 4. First Aid Measures

Inhalation: Remove from exposure area to fresh air immediately. If breathing has stopped, perform artificial resuscitation. Keep person warm and at rest. Treat symptomatically and supportively. Seek medical attention immediately. Qualified medical personnel should consider administering oxygen.

Ingestion: Give large amounts of fresh water or milk immediately. Do not give anything by mouth if person is unconscious or otherwise unable to swallow. If vomiting occurs, keep head below hips to prevent aspiration. Treat symptomatically and supportively. Seek medical attention immediately.

Eye Contact: Flush eye with copious quantities of water. If persistent irritation occurs, obtain medical attention. If liquid phosphoric acid or solutions containing phosphoric acid get into the eyes, flush eyes immediately with a directed stream of water for at least 30 minutes while forcibly holding eyelids apart to ensure complete irrigation of all eye and lid tissue. GET MEDICAL ATTENTION IMMEDIATELY. Contact lenses should not be worn when working with this chemical.

Skin Contact: Remove contaminated clothing and wash affected skin with soap and water. If persistent irritation occurs, obtain medical attention. When using high pressure equipment, injection of product under the skin can occur. If high pressure injuries occur, the casualty should be sent immediately to a hospital. Do not wait for symptoms to develop.

Note to Physician: All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.



Section 5. Firefighting Measures

General Fire Hazards: Emergency responders in the danger area should wear bunker gear and self-contained breathing apparatus for fires beyond the incipient stage (29 CFR 1910.156). In addition, wear other appropriate protective equipment as conditions warrant (see Section 8). Contact with water may generate heat. Isolate damage area, keep unauthorized personnel out. Stop spill/release if it can be done with minimal risk. Move undamaged containers from danger area if it can be done with minimal risk. Fires involving small amounts of combustibles may be smothered with suitable dry chemicals. Use water on combustibles burning but avoid using water directly on acid as it results in evolution of heat and causes splattering.

Auto-ignition Temp: No Data Available

Extinguishing Media: Fires involving small amount of combustibles may be smothered with suitable dry chemical, soda ash, lime, sand or CO₂. Use water on combustibles burning in vicinity of this material but use care as water applied directly to this acid result in evolution of heat and causes splattering.

Special Firefighting Procedures: Phosphoric Acid at a high concentration can cause very serious damage upon contact. It burns the cornea and can lead to permanent blindness if splashed onto eyes. Spilled product on ground may be slippery. Accordingly, safety precautions should be strictly observed when handling or cleaning it when spilled as the result of a fire.

Unusual Fire and Explosion Hazards: Containers may explode from internal pressure if confined to fire. Cool with water spray.

Section 6. Accidental Release Measures

Spill Procedures: Wear appropriate personal protective equipment before approaching spill site. For small spills, dilute with water to sewer if allowed by local and state regulations. If unable to wash product with water, absorb with inert material (sand or other approved material) and dispose of in accordance with applicable regulations.

Waste Disposal: Treatment, storage, transportation and disposal must be in accordance with Federal, State/Provincial, and Local Regulations. Regulations may vary in different locations. Characterization and compliance with applicable laws are the responsibility solely of the generator. Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

RCRA Status: If discarded in its purchased form, this product is considered a RCRA hazardous waste. It is the responsibility of the product user to determine at the time of disposal, whether a material containing the product should be classified as a hazardous waste. (40 CFR 261.20-24).



Section 7. Handling and Storage

Storage: Keep in a tightly closed container, stored in a cool, dry, ventilated area below 44°C (110°F). Protect against physical damage. Isolate from incompatible substances. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid); observe all warnings and precautions listed for the product. Drum must not be washed out or used for other purposes.

Handling: Avoid contact with eyes, skin and clothing. Do not inhale vapors and fumes. Wash thoroughly after handling. Use only with adequate ventilation. Do not take internally.

Section 8. Exposure Controls / Personal Protection

Occupational Exposure Limits

Hazardous Ingredients	PEL	TLV-TWA	Notes
Phosphoric Acid	2 mg/m ³	1 mg/m ³	
Glycol Ether EB	40 ppm	40 ppm	
Nonionic Surfactant	None Established	None Established	

Exposure Controls: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Please refer to the ACGIH document, Industrial Ventilation, A Manual of Recommended Practices, most recent edition, for details.

Respiratory Protection: If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. In the United States of America, if respirators are used, a program should be instituted to assure compliance with OSHA Standard 63 FR 1152, January 8, 1998. Respirator type: Air-purifying respirator with an appropriate, government approved (where applicable), air-purifying filter, cartridge or canister. Contact health and safety professional or manufacturer for specific information. Self-Contained Breathing Apparatus may be required for use in confined or enclosed spaces.

Protective Clothing

Eye/face protection: Wear chemical goggles; face shield (if splashing is possible).

Skin protection: Chemical resistant, impermeable gloves. Gloves should be tested to determine suitability for prolonged contact. Use of impervious apron and boots are recommended.

Additional Measures: Avoid contact with the skin and avoid breathing vapors. Do not eat, drink, or smoke in work area. Wash hands before eating, drinking, or using restroom. Do NOT place food, coffee or other drinks in the area where dusting or splashing of solutions is possible. Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco. Safety shower and eye wash should be available close to work areas.



Section 9. Physical and Chemical Properties

Boiling Point: 225°F (107°C)
Freezing Point: 0°F (-17.5°C)
Flash Point: Non-flammable
Upper Flame Limit: NA
Lower Flame Limit: NA
Vapor Pressure: Similar to water
Vapor Density (Air=1): N/D
Specific Gravity: 1.38 - 1.42
pH: < 1
Solubility in Water: 100%
Volatility
Including Water: 11.62 pounds per gallon
Molecular Weight: N/D
Evaporation Rate: < 1
Physical State: Liquid
Color: Clear
Odor: Acidic

Section 10. Stability and Reactivity

Stability: Stable
Hazardous Decomposition: Will not occur
Incompatibility: Liberates explosive hydrogen gas when reacting with chlorides and stainless steel. Can react violently with sodium tetrahydroborate. Exothermic reactions with aldehydes, amines, amides, alcohols and glycols, azo-compounds, carbamates, esters, caustics, phenols and cresols, ketones, organophosphates, epoxides, explosives, combustible materials, unsaturated halides, and organic peroxides. Phosphoric acid forms flammable gases with sulfides, mercaptans, cyanides, and aldehydes. It also forms toxic fumes with cyanides, sulfide, fluorides, organic peroxides, and halogenated organics. Mixtures with nitromethane are explosive.
Hazardous Reactions: Phosphoric Acid may react vigorously, violently, or explosively with many organic and inorganic chemicals.

Section 11. Toxicological Information

Phosphoric Acid has produced no genetic changes in standard tests using bacterial cells.

Threshold Limit Value: 2 mg/m³ based on Phosphoric Acid in blend.
OSHA PEL: 2 mg/m³
Listed Carcinogen: Phosphoric Acid has produced no genetic changes in standard tests using bacterial cells.



Medical Condition Aggravated: Overexposure to phosphoric acid mist may cause lung damage and aggravate pulmonary conditions. Contact of phosphoric acid with skin may aggravate diseases such as eczema and contact dermatitis.

Information on Acute Toxicological Effects

Oral: Corrosive. Causes serious burns of the mouth or perforation of the esophagus or stomach. May be fatal if swallowed.

Dermal: Corrosive. Splashes on the skin may cause mild to severe irritation and possible chemical burns. Direct contact can be severely irritating to the skin and may result in redness, swelling, burns and possible severe skin damage.

Inhalation: Corrosive. May be harmful or fatal if inhaled. May cause severe irritation and burns of the nose, throat and respiratory tract.

Repeated Dose Toxicity: Phosphoric Acid has produced no genetic changes in standard tests using bacterial cells. No data on other effects on Humans.

Skin Corrosion/Irritation: The results of single exposure tests indicate that these concentrations of phosphoric acid are slightly toxic after skin application. Following a 24-hour exposure, irreversible eye and skin damage occurred at all tested concentrations of phosphoric acid.

Serious Eye Damage/Irritation: Corrosive. Direct contact with the liquid or exposure to vapors or mists may cause stinging, tearing, redness, swelling, corneal damage and irreversible eye damage. Splashes in the eyes will cause severe burns. Contact lenses should not be worn when working with this chemical.

Respiratory or Skin Sensitization: Repeated exposure of workers to the mist causes chronic conjunctivitis, tracheobronchitis, stomatitis, and dermatitis.

Mutagenicity

In Vitro: No Data Available

In Vivo: No Data Available

Carcinogenicity: NOT a suspected Human carcinogen.

Reproductive Toxicity: Based on the available test, not expected to cause adverse effects on reproduction.

Specific Target Organ Toxicity - Single Exposure

General: Liquid or vapors may be irritating to skin and eyes.

Inhalation: High concentrations of vapor may cause irritation of the respiratory tract, experienced as nasal discomfort and discharge, possibly with chest pain and coughing. Headache, nausea, vomiting, dizziness, and drowsiness may occur.

Eyes: May cause mild to severe irritation experienced as discomfort or pain, excess blinking and tear production, possibly with marked redness and swelling of the conjunctiva.

Skin: Brief contact may cause slight irritation with itching and local redness. Prolonged contact, especially with concentrate, may cause more severe irritation, with discomfort or pain.

Ingestion: May cause headache, dizziness, in-coordination, nausea, vomiting, diarrhea, and general weakness.



Specific Target Organ Toxicity - Repeated Exposure: The effects of long-term, low-level exposures to this product have not been determined. Safe handling of this material on a long-term basis should emphasize the avoidance of all effects from repetitive acute exposure. This product may aggravate existing eye, skin, and respiratory conditions.

Aspiration Hazard: Droplets of the product aspirated into the lungs through ingestion or vomiting may cause chemical pneumonia.

Other Adverse Effects: No data available

Section 12. Ecological Information

Acute Toxicity

Fish: No data available

Aquatic Invertebrates: No data available

Chronic Toxicity

Fish: No data available

Aquatic Invertebrates: No data available

Toxicity To Aquatic Plants: No data available

Persistence and Degradability

Biodegradation: No specific biodegradation test data located. While acidity of this material is readily reduced in natural waters, the resulting phosphate may persist indefinitely or incorporate into biological systems.

Biological Oxygen Demand: No data available

Chemical Oxygen Demand: No data available

BOD/COD Ratio: No data available

Bioaccumulative Potential: No specific biodegradation test data was located in a search of the available scientific literature. It was reported in the literature that while acidity of this material may be reduced readily in natural waters, the phosphate may persist indefinitely.

Mobility in Soil: Phosphoric acid (solution) is soluble in water and has high mobility in soil. During transport through the soil, phosphoric acid (solution) may dissolve some of the soil material; in particular, the carbonate based materials. The acid will be neutralized to some degree, however, significant amounts of acid are expected to remain for transport down towards the ground water table. Upon reaching the ground water table, the acid will continue to move, now in the direction of the ground water flow. Lime addition may be required to rectify low pH resulting from phosphoric acid (solution) spillages.

Results of PBT and mPvB Assessment: Not fulfilling PBT (persistent/bioaccumulative/toxic) criteria. Not fulfilling vPvB (very persistent, very bioaccumulative) criteria.

Other Adverse Effects: No data available

Section 13. Disposal Considerations

Waste Treatment Methods: Dispose of product and contaminated packaging in accordance with all local, state, and federal environmental control regulations.



Section 14. Transport Information

Important Note: Shipping descriptions may vary based on mode of transport, quantities, package size, and/or origin and destination. Consult your company's Hazardous Materials/Dangerous Goods expert for information specific to your situation.

UN/NA Number: 1760

Proper Shipping Name: Corrosive Liquid, n.o.s., Contains (Phosphoric Acid)

Hazard Class: 8

Packaging Group: III

Letter: C (Corrosive substances)

Environmental Hazard: Phosphoric acid is, with high probability, not acutely harmful to aquatic life and it does not accumulate in the food chain.

Reportable Quantity: 6,338 pounds (2875 kilograms) based on Phosphoric Acid in mixture

Section 15. Regulatory Information

This Safety Data Sheet conforms to ANSI Z400.5, and to the format requirements and the International Chemical Safety Cards of the Global Harmonizing System. This SDS complies with 29 CFR 1910.1200 (Hazard Communication Standard).

Important: Read this SDS before handling & disposing of this product. Pass this information on to employees, customers, & users of this product.

EPA SRA Title III Chemical Listings

TSCA Status: This product is listed on the TSCA inventory. If this product is a blend, all ingredients in the product are listed on the TSCA Inventory List. Any impurities present in this product are exempt from listing.

Section 302: Phosphoric Acid CAS # 7664-38-2; 5000 pounds (2267.96 kilograms), Threshold Planning Quantity (TPQ)

Section 304: Phosphoric Acid CAS # 7664-38-2; 5000 pounds (2267.96 kilograms), Threshold Planning Quantity (TPQ)

Section 312: Yes

SARA Section 313: This material contains 20 - 99% Phosphoric Acid (CAS# 7664-38-2), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

Acute: Yes

Chronic: Yes

Fire: No

Pressure: No

Reactive: No

Clean Water Act: Yes

IMDG - International Marine Dangerous Goods Code

UN1760, Corrosive Liquid, n.o.s., Contains (Phosphoric Acid), 8, PG III.

Static Accumulator: No.



IATA

UN1760, Corrosive Liquid, n.o.s., Contains (Phosphoric Acid), 8, PG III.

DEA Chemical Trafficking Act: No

HMIS Rating

Health: 3

Flammability: 0

Reactivity: 0

Personal Protection: H

Section 16. Other Information

Disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.

REVISION DATE: 12/3/2015

