

# Material Safety Data Sheet

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Phosphate Acid Reagent Vials  
**Catalog Number:** 2742900

Hach Company  
P.O.Box 389  
Loveland, CO USA 80539  
(970) 669-3050

**Emergency Telephone Numbers:**  
(Medical and Transportation)  
(303) 623-5716 24 Hour Service  
(515)232-2533 8am - 4pm CST

**MSDS Number:** M01616  
**Chemical Name:** Not applicable  
**CAS No.:** Not applicable  
**Chemical Formula:** Not applicable  
**Chemical Family:** Not applicable  
**Hazard:** Causes eye burns. Harmful if inhaled. Carcinogen.  
**Date of MSDS Preparation:**  
**Day:** 8  
**Month:** 04  
**Year:** 2003

## 2. COMPOSITION / INFORMATION ON INGREDIENTS

### Demineralized Water

**CAS No.:** 7732-18-5  
**TSCA CAS Number:** 7732-18-5  
**Percent Range:** 90.0 - 100.0  
**Percent Range Units:** volume / volume  
**LD50:** None reported  
**LC50:** None reported  
**TLV:** Not established  
**PEL:** Not established  
**Hazard:** No effects anticipated.

### Sulfuric Acid

**CAS No.:** 7664-93-9  
**TSCA CAS Number:** 7664-93-9  
**Percent Range:** 1.0 - 5.0  
**Percent Range Units:** volume / volume  
**LD50:** Oral rat LD50 = 2140 mg/kg.  
**LC50:** Inhalation rat LC50 = 87 ppm/4 hr  
**TLV:** 1 mg/m<sup>3</sup> (TWA); 3 mg/m<sup>3</sup> (STEL)  
**PEL:** 1 mg/m<sup>3</sup>  
**Hazard:** Causes severe burns. Harmful if inhaled. Recognized carcinogen.

## 3. HAZARDS IDENTIFICATION

### **Emergency Overview:**

**Appearance:** Clear, colorless liquid  
**Odor:** None  
CAUSES EYE BURNS MAY CAUSE RESPIRATORY TRACT IRRITATION  
CANCER HAZARD CONTAINS SULFURIC ACID WHICH CAN CAUSE CANCER

**HMIS:**

**Health:** 4  
**Flammability:** 0  
**Reactivity:** 0  
**Protective Equipment:** X - See protective equipment, Section 8.

**NFPA:**

**Health:** 3  
**Flammability:** 0  
**Reactivity:** 0  
**Symbol:** Not applicable

**Potential Health Effects:**

**Eye Contact:** Causes eye burns.  
**Skin Contact:** No effects are anticipated  
**Skin Absorption:** None reported  
**Target Organs:** None reported  
**Ingestion:** Causes: irritation of the mouth and esophagus May cause: vomiting diarrhea  
**Target Organs:** None reported  
**Inhalation:** May cause: respiratory tract irritation teeth erosion mouth soreness difficult breathing  
**Target Organs:** Lungs  
**Medical Conditions Aggravated:** Pre-existing: Eye conditions Respiratory conditions  
**Chronic Effects:** Chronic overexposure may cause erosion of the teeth chronic irritation or inflammation of the lungs cancer  
**Cancer / Reproductive Toxicity Information:**  
This product does NOT contain any OSHA listed carcinogens.

An ingredient of this mixture is: IARC Group 1: Recognized Carcinogen  
Sulfuric Acid - The IARC evaluation was based on exposure to the mist or vapor of concentrated sulfuric acid generated during chemical processes.  
This product does NOT contain any NTP listed chemicals.

**Additional Cancer / Reproductive Toxicity Information:** None reported  
**Toxicologically Synergistic Products:** None reported

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## 4. FIRST AID

**Eye Contact:** Immediately flush eyes with water for 15 minutes. Call physician.  
**Skin Contact (First Aid):** Wash skin with plenty of water.  
**Ingestion (First Aid):** Do not induce vomiting. Give 1-2 glasses of water. Call physician immediately. Never give anything by mouth to an unconscious person.  
**Inhalation:** Remove to fresh air.

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## 5. FIRE FIGHTING MEASURES

**Flammable Properties:** Material will not burn. During a fire, irritating and highly toxic gases may be generated by thermal decomposition.  
**Flash Point:** Not applicable  
**Method:** Not applicable  
**Flammability Limits:**  
**Lower Explosion Limits:** Not applicable  
**Upper Explosion Limits:** Not applicable  
**Autoignition Temperature:** Not determined  
**Hazardous Combustion Products:** This material will not burn.  
**Fire / Explosion Hazards:** This product will not burn or explode.  
**Static Discharge:** None reported.  
**Mechanical Impact:** None reported  
**Extinguishing Media:** Use media appropriate to surrounding fire conditions  
**Fire Fighting Instruction:** As in any fire, wear self-contained breathing apparatus pressure-demand and full protective gear.

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## 6. ACCIDENTAL RELEASE MEASURES

### **Spill Response Notice:**

Only persons properly qualified to respond to an emergency involving hazardous substances may respond to a spill according to federal regulations (OSHA 29 CFR 1910.120(a)(v)) and per your company's emergency response plan and guidelines/procedures. See Section 13, Special Instructions for disposal assistance.

**Containment Technique:** Absorb spilled liquid with non-reactive sorbent material. Stop spilled material from being released to the environment.

**Clean-up Technique:** Cover spilled material with an alkali, such as soda ash or sodium bicarbonate. Scoop up slurry into a large beaker. Dilute with a large excess of water. Adjust to a pH between 6 and 9. Use sulfuric or citric acid to lower pH. Use soda ash or sodium bicarbonate to increase pH. Flush reacted material to the drain with a large excess of water. Decontaminate the area of the spill with a soap solution.

**Evacuation Procedure:** Evacuate local area (15 foot radius or as directed by your facility's emergency response plan) when: any quantity is spilled. If conditions warrant, increase the size of the evacuation. If conditions warrant, increase the size of the evacuation.

**Special Instructions (for accidental release):** Mixture contains a component which is regulated as a water pollutant. Product is regulated as RCRA hazardous waste.

**304 EHS RQ (40 CFR 355):** Sulfuric Acid - RQ 1000 lbs.

**D.O.T. Emergency Response Guide Number:** 154

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## 7. HANDLING / STORAGE

**Handling:** Avoid contact with eyes. Do not breathe mist or vapors. Use with adequate ventilation. Wash thoroughly after handling. Maintain general industrial hygiene practices when using this product.

**Storage:** Store between 10° and 25°C.

**Flammability Class:** Not applicable

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## 8. EXPOSURE CONTROLS / PROTECTIVE EQUIPMENT

**Engineering Controls:** Have an eyewash station nearby. Use general ventilation to minimize exposure to mist, vapor or dust. Maintain general industrial hygiene practices when using this product.

### **Personal Protective Equipment:**

**Eye Protection:** chemical splash goggles

**Skin Protection:** disposable latex gloves lab coat

**Inhalation Protection:** adequate ventilation

**Precautionary Measures:** Avoid contact with: eyes skin. Do not breathe: mist/vapor. Use with adequate ventilation. Protect from: heat

**TLV:** Not established

**PEL:** Not established

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## 9. PHYSICAL / CHEMICAL PROPERTIES

**Appearance:** Clear, colorless liquid

**Physical State:** Liquid

**Molecular Weight:** Not applicable

**Odor:** None

**pH:** Not determined

**Vapor Pressure:** Not determined

**Vapor Density (air = 1):** Not determined

**Boiling Point:** Not determined

**Melting Point:** Not applicable

**Specific Gravity (water = 1):** Not determined

**Evaporation Rate (water = 1):** Not determined

**Volatile Organic Compounds Content:** Not applicable

**Partition Coefficient (n-octanol / water):** Not applicable

**Solubility:**

**Water:** Soluble

**Acid:** Not determined  
**Other:** Not determined  
**Metal Corrosivity:**  
**Steel:** Not determined  
**Aluminum:** Not determined

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## 10. STABILITY / REACTIVITY

**Chemical Stability:** Stable when stored under proper conditions.  
**Conditions to Avoid:** Extreme temperatures Heating to decomposition.  
**Reactivity / Incompatibility:** Incompatible with: alkalies oxidizers reducers  
**Hazardous Decomposition:** Heating to decomposition releases toxic and/or corrosive fumes of: sulfur oxides  
**Hazardous Polymerization:** Will not occur.

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## 11. TOXICOLOGICAL INFORMATION

**Product Toxicological Data:**

**LD50:** None reported

**LC50:** None reported

**Dermal Toxicity Data:** None reported

**Skin and Eye Irritation Data:** Skin irritation testing performed on 10% sulfuric acid showed SLIGHT to NO IRRITATION effects

**Mutation Data:** None reported

**Reproductive Effects Data:** None reported

**Ingredient Toxicological Data:** Sulfuric acid: oral rat LD50 = 2140 mg/kg; inhalation rat LC50 = 87 ppm/4h

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## 12. ECOLOGICAL INFORMATION

**Product Ecological Information:** --

No ecological data available for this product.

**Ingredient Ecological Information:** --

No ecological data available for the ingredients of this product.

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## 13. DISPOSAL CONSIDERATIONS

**EPA Waste ID Number:** D002

**Special Instructions (Disposal):** Work in an approved fume hood. Dilute to 3 to 5 times the volume with cold water. Adjust to a pH between 6 and 9 with an alkali, such as soda ash or sodium bicarbonate. Open cold water tap completely, slowly pour the reacted material to the drain. Allow cold water to run for 5 minutes to completely flush the system.

**Empty Containers:** Rinse three times with an appropriate solvent. Dispose of empty container as normal trash. Rinsate from empty containers may contain sufficient product to require disposal as hazardous waste.

**NOTICE (Disposal):** These disposal guidelines are based on federal regulations and may be superseded by more stringent state or local requirements. Please consult your local environmental regulators for more information.

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## 14. TRANSPORT INFORMATION

**D.O.T.:**

**D.O.T. Proper Shipping Name:** Corrosive Liquid, Acidic, Inorganic, N.O.S.

(< 10% Sulphuric Acid Solution)

**DOT Hazard Class:** 8

**DOT Subsidiary Risk:** NA

**DOT ID Number:** UN3264

**DOT Packing Group:** III

**I.C.A.O.:**

**I.C.A.O. Proper Shipping Name:** Corrosive Liquid, Acidic, Inorganic, N.O.S.

(<10 % Sulphuric Acid Solution)

Headquarters  
Company  
P.O. Box 389  
Loveland, CO USA 80539  
(970) 669-3050

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**ICAO Hazard Class:** 8  
**ICAO Subsidiary Risk:** NA  
**ICAO ID Number:** UN3264  
**ICAO Packing Group:** III  
**I.M.O.:**  
**I.M.O. Proper Shipping Name:** Corrosive Liquid, Acidic, Inorganic, N.O.S.  
(<10 % Sulphuric Acid Solution)  
**I.M.O. Hazard Class:** 8  
**I.M.O. Subsidiary Risk:** NA  
**I.M.O. ID Number:** UN3264  
**I.M.O. Packing Group:** III

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## 15. REGULATORY INFORMATION

### U.S. Federal Regulations:

**O.S.H.A.:** This product meets the criteria for a hazardous substance as defined in the Hazard Communication Standard. (29 CFR 1910.1200)

### E.P.A.:

**S.A.R.A. Title III Section 311/312 Categorization (40 CFR 370):** Immediate (Acute) Health Hazard Delayed (Chronic) Health Hazard

**S.A.R.A. Title III Section 313 (40 CFR 372):** This product does NOT contain any chemical subject to the reporting requirements of Section 313 of Title III of SARA.

**302 (EHS) TPQ (40 CFR 355):** Sulfuric Acid 1000 lbs.

**304 CERCLA RQ (40 CFR 302.4):** Sulfuric Acid 1000 lbs.

**304 EHS RQ (40 CFR 355):** Sulfuric Acid - RQ 1000 lbs.

**Clean Water Act (40 CFR 116.4):** Sulfuric acid - RQ 1000 lbs.

**RCRA:** Contains RCRA regulated substances. See Section 13, EPA Waste ID Number.

**C.P.S.C.:** Not applicable

### State Regulations:

**California Prop. 65:** No Prop. 65 listed chemicals are present in this product.

**Identification of Prop. 65 Ingredient(s):** None

**Trade Secret Registry:** Not applicable

### National Inventories:

**U.S. Inventory Status:** All ingredients in this product are listed on the TSCA 8(b) Inventory (40 CFR 710).

**TSCA CAS Number:** Not applicable

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## 16. OTHER INFORMATION

**Intended Use:** Standard solution

**References:** TLV's Threshold Limit Values and Biological Exposure Indices for 1992-1993. American Conference of Governmental Industrial Hygienists, 1992. In-house information. Technical Judgment. Air Contaminants, Federal Register, Vol. 54, No. 12. Thursday, January 19, 1989. pp. 2332-2983. Vendor Information. IARC Monographs on the Evaluation of the Carcinogenic Risks to Humans. World Health Organization (Volumes 1-42) Supplement 7. France: 1987.

**Revision Summary:**

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### Legend:

NA - Not Applicable	w/w - weight/weight
ND - Not Determined	w/v - weight/volume
NV - Not Available	v/v - volume/volume

**USER RESPONSIBILITY:** Each user should read and understand this information and incorporate it in individual site safety programs in accordance with applicable hazard communication standards and regulations.

World Headquarters  
Hach Company  
P.O.Box 389  
Loveland, CO USA 80539  
(970) 669-3050

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