

Safety Data Sheet

Section 1: Identification.....	2
Section 2: Hazard identification.....	2
Section 3: Composition/Information On Ingredients.....	4
Section 4: First Aid Measures.....	4
Section 5: Fire Fighting Measures.....	5
Section 6: Accidental Release Measures.....	5
Section 7: Handling And Storage.....	6
Section 8: Exposure Control/Personal Protection.....	6
Section 9: Physical And Chemical Properties.....	6
Section 10: Stability And Reactivity.....	7
Section 11: Toxicological Information.....	7
Section 12: Ecological Information.....	8
Section 13: Disposal Considerations.....	8
Section 14: Transportation Information.....	8
Section 15: Regulatory.....	8
Section 16: Other Information.....	9

Section 1: Identification

1.1 Product Identifier

Product Name	: Perchloric Acid 70%
CAS No.	: 7601-90-3
Synonyms	: Dioxonium perchlorate; Hydronium perchlorate; Perchloric acid solution
Recommended Use	: Laboratory chemicals

1.2 Details of the supplier of the safety data sheet

Company	: 9920 Pacific Heights Blvd Suit 150 San Diego California -92121
---------	---

1.3 Emergency Telephone number

Emergency phone	: +1 (858) 245-0283
-----------------	---------------------

Section 2: Hazard identification

2.1 Classification

Oxidizing liquids	Category 1
Corrosive to metals	Category 1
Acute oral toxicity	Category 4
Skin Corrosion/Irritation	Category 1A
Serious Eye Damage/Eye Irritation	Category 1
Specific target organ toxicity (single exposure)	Category 3
Target Organs - Respiratory system	Category 2

Specific target organ toxicity - (repeated exposure) Target
Organs - Thyroid

2.2 Pictograms or Hazard symbols



Signal Word: Danger

May be corrosive to metals.

Fatal if inhaled. May be harmful if swallowed.

Causes severe skin burns and serious eye damage. Causes serious eye damage.

May cause cancer. Harmful to aquatic organisms.

2.3 Precautionary Statements

- | | |
|----------------|--|
| P234 | Keep only in original container. |
| P260 | Do not breathe fume/gas/mist/vapors. |
| P264 | Wash thoroughly after handling. |
| P271 | Use only outdoors or in a well-ventilated area |
| P273 | Avoid release to the environment |
| P280 | Wear protective gloves, clothing, and eye and face protection. |
| P284 | In case of inadequate ventilation, wear respiratory protection. |
| P301+P310 | If swallowed, immediately call a physician. |
| P301+P330+P331 | If swallowed, rinse mouth. Do not induce vomiting. |
| P303+P361+P353 | If on skin (or hair) take off immediately all contaminated clothing.
Rinse skin with water. |
| P305+P351+P338 | If in eyes, rinse cautiously with water for several minutes |
| P308+P313 | If exposed or concerned, get medical advice/attention. |
| P310 | Seek medical assistance if exposed. |

P320	Specific treatment is urgent
P321	Specific treatment (if in eyes, wash with plenty of running water; if in contact with skin, wash with plenty of running water; if inhaled, move to fresh air; if ingested, seek medical advice on whether to induce vomiting)
P363	Wash contaminated clothing before reuse.
P390	Absorb spillage to prevent material damage.
P403+P233	Store in a well-ventilated place. Keep container tightly closed
P405	Store locked up.
P406	Store in corrosive resistant container.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

Section 3: Composition/Information On Ingredients

Material		Wt%
Sulfuric Acid	CAS# 7664-93-9	90-98
Water	CAS# 7732-18-5	2-10
Total		100

Section 4: First Aid Measures

4.1 Effects Of Overexposure

Eye Contact: Corrosive to naked eye; in case of contact flush eyes well for 15 minutes, lifting the lower and upper eyelids occasionally. May cause blindness. Seek medical attention.

Skin Contact: Obtain medical attention: Corrosive to exposed skin. Flush skin well with water for 15 minutes, wash with soap and water. Remove affected clothing, get medical attention. May cause deep, penetrating burns.

Inhalation: If inhaled, remove to fresh air. If not breathing give artificial respiration. Seek medical attention. Inhalation of vapors may cause coughing, choking, inflammation of the nose, throat, and upper respiratory tract. In severe cases, may pulmonary edema, circulatory failure, and death.

Ingestion: Will cause severe burns to the mouth and damage to the digestive tract. Causes gastrointestinal burns and perforation of the digestive tract. Get Medical Attention immediately. Do not induce vomiting; give large quantities of water.

Section 5: Fire Fighting Measures

Flash Point and Method: Non-flammable

Autoignition Temperature: Not Applicable

Flammability Limits In Air: Not Applicable

Extinguishing media: Dry chemical, foam or carbon dioxide. Do not use water on material. Water spray may be used to keep fire exposed containers cool.

Special fire fighting procedures: Wear chemically retardant gear and NIOSH approved self-contained breathing apparatus. Thermal decomposition produces irritating and toxic fumes. Extreme heat or contact with metals can release flammable hydrogen gas.

Concentrated material is strong dehydrating agent. Reacts with organic materials and may cause ignition of finely divided materials on contact. Contact with most metals causes formation of flammable and explosive hydrogen gas.

Toxic gases released: Sulfurous oxides

Section 6: Accidental Release Measures

SPILLS, LEAKS: Ventilate area of leak or spill. Stop leak if possible to do so without risk. Clean-up personnel should wear protective clothing and NIOSH approved respirator. Dike and cover the contaminated areas with absorbent, non-combustible material such as earth, sand, or vermiculite. Neutralize with alkaline material such as soda ash or lime. Do not use combustibles. Do not flush to sewer.

Section 7: Handling And Storage

Wash thoroughly after handling. Remove contaminated clothing and wash before re-use. Do not breathe dust, mist, or vapor. Do not expose eyes, skin, or clothing. Keep container closed tightly. Avoid contact with combustibles. Do not use with metal tools or items. Use with adequate ventilation or respiratory protection. Do not store near combustibles or in direct sunlight. Store in a cool, dry, well-ventilated area away from incompatible substances. Separate from metals, alkali, and organics. Residue in empty containers may still be hazardous.

Section 8: Exposure Control/Personal Protection

Respiratory protection: Wear NIOSH/MESA approved full or half face piece (with goggles) respiratory protective equipment to avoid exposure to vapors above 0.1ppm. A respiratory protection program complying with requirements of 29CFR 1910.134 is recommended.

Ventilation: Where adequate ventilation is not available, use NIOSH approved vapor respirator with dust, fume and mist filters. Local ventilation through fume hoods or laminar flow stations is also preferred. Keep fumes away from strong bases.

Protective gloves: Skin contact should be minimized through use of rubber gloves.

Other protective equipment: Steel tipped shoes/eye wash station/chemical safety chemical retardant clothing.

Eye protection: Safety goggles / face shield.

Section 9: Physical And Chemical Properties

Form	: Liquid
Appearance	: Colorless
Odor	: Odorless
pH	: < 1
Melting point	: 3 °C
Boiling point/Boiling range	: 290 °C
Flash point	: Non-flammable

Ignition point	: Will not ignite
Danger of explosion	: Product is not explosive
Decomposition temperature	: > 150 °C
Vapor density (Air = 1)	: No information
Volatiles, %	: NA
Vapor pressure at 15° C, mm Hg	: 190 mm Hg at 25 °C
Specific gravity	: 1.84
Solubility in / Miscibility	: Completely miscible in water
Evap. Rate (Water = 1)	: No information found

Section 10: Stability And Reactivity

Stability: Stable

Conditions to avoid: Excess heat, sunlight, confined spaces.

Incompatible with: Most common metals, strong bases, metal oxides, amines, hydroxides, cyanides, sulfides, sulfites, formaldehyde, and carbonates.

Hazardous decomposition products: Hydrogen chloride fumes, hydrogen gas

Hazardous polymerization: Will not occur.

Conditions to avoid: Excess heat, direct sunlight.

Section 11: Toxicological Information

ACUTE:

Oral, rat LD₅₀: 2140 mg/kg

Inhalation, rat LD₅₀: 510 mg/m³/2H

Standard Draize, eye, rabbit: 250 micrograms (severe)

Oral rabbit LD₅₀: 1350 mg/kg

Investigated as a tumorigen, mutagen, reproductive effector

Carcinogenicity: NTP: No IARC: No Z List: No OSHA reg: No

IARC has classified "strong inorganic acid mists containing sulfuric acid" as a known human

carcinogen (IARC Registry 1). This classification applies only to mists containing sulfuric acid and not to sulfuric acid or sulfuric acid solutions.

OTHER DATA:

Strongly corrosive. Vapor inhalation burns mucous membranes; causes coughing, dyspnoea.

Section 12: Ecological Information

Bioaccumulation : When released into the soil, this material may leach into groundwater. When released into the air, this material may be removed from the atmosphere to a moderate extent by wet deposition. When released into the air, this material may be removed from the atmosphere to a moderate extent by dry deposition.

Environmental Toxicity:

LC₅₀ (flounder): 100-330 mg/L/48 hr aerated water.

LC₅₀ (shrimp): 80-90 mg/L/48 hr aerated water.

LC₅₀ (prawn): 42.5 ppm/48 hr salt water.

This material may be toxic to aquatic life.

Section 13: Disposal Considerations

DISPOSAL: Dispose of in accordance with all federal state and local regulations. Send waste to an approved waste disposal facility.

Section 14: Transportation Information

Class 8

PG II

UN 1830

Shipping Name : Sulfuric Acid

Section 15: Regulatory

Symbol: C, Corrosive.

R-Phrase: 35, causes severe burns

S23-36/37/39-45 Do not breathe vapor. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing, gloves, and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show the

label where possible).

Section 16: Other Information

NFPA Codes:

Health: 3

Flammability: 0

Reactivity: 2

R35: Causes severe burns.

Ingredients are TSCA listed.

Further information

The information and recommendations in this SDS are to the best of our knowledge, information and belief accurate at the time of publication. Although utmost care is been taken in composition of this text, Highpuris LLC cannot be held responsible for any damage resulting from any possible error in this publication.