

SECTION 4 — FIRE AND EXPLOSION HAZARD DATA

Incompatibility (Materials to Avoid) Metals, nitrates, chlorates, carbides, fulminates, picrates and other organic materials. Releases hydrogen gas and sulfur dioxide fumes when in contact with most metals.

Stability Stable

Hazardous Decomposition Products Sulfur trioxide, carbon monoxide, sulfuric acid fumes, sulfur dioxide (secondary: hydrogen cyanide, carbon monoxide).

Hazardous Polymerization Will not occur.

SECTION 5 — HEALTH HAZARDS

Threshold Limit Value (TLV): Permissible exposure limits:

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|--------|----------------------------------|------|-----------------------------|
| TLV: | 1 mg/m ³ (TWA) | PEL: | 1 mg/m ³ (TWA) |
| NIOSH: | 1 mg/m ³ (10 hr. TWA) | | 50 mg/m ³ (IDLH) |

Signs and Symptoms of Exposure:

Acute: Eyes-Severe burns, cornea damage, blindness.

Skin-Severe irritation, burns, ulceration.

Inhalation-Respiratory irritation, inflammation of bronchial membranes.

Ingestion-Severe burns and ulceration of mouth, throat, esophagus and stomach, damage to kidney and intestinal tract.

Chronic: Inhalation-Erosion of teeth, inflammation of nose, throat and bronchial tubes.

Medical Conditions Generally Aggravated by Exposure Respiratory exposure to airborne sulfuric acid will aggravate lung damage or other pulmonary conditions.

Routes of Entry Skin, eyes, inhalation, ingestion.

Carcinogenicity

| | | | | | | | |
|-----------------------------|------------|---------------------|-----|------|------------|---------|------------|
| National Toxicology Program | None Found | I.A.R.C. Monographs | Yes | OSHA | None found | EPA CAG | None found |
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Human Health Effects:

The International Agency for Research on Cancer (IARC) has classified "strong inorganic acid mist containing sulfuric acid" as a Category 1 carcinogen, a substance that is carcinogenic to humans. This classification does not apply to liquid forms of sulfuric acid or sulfuric acid solutions contained within a battery. Inorganic acid mist (sulfuric acid mist) is not generated under normal use of this product. Misuse of the product, such as overcharging, may however result in the generation of sulfuric acid mist.

Emergency and First Aid Procedures:

- Inhalation:** Remove to fresh air. If person is unconscious or experiencing breathing difficulty, arrange for emergency transport to a hospital. Administer oxygen/CPR as appropriate.
- Eyes:** Wash eyes with copious amount of water for 15 minutes or until acid is removed. Hold lids open while washing. See physician immediately.
- Skin:** Remove all contaminated clothing, flush skin with copious quantities of water until free of acid.
- Ingestion:** DO NOT INDUCE VOMITING, do not give anything by mouth to an unconscious patient, see physician immediately. If conscious, wash out mouth, do not swallow.

SECTION 6 — SPECIAL PROTECTION INFORMATION

Respiratory Protection: Half-face or full face mask, or PAPR with acid mist filter or Type C supplied air or self contained breathing apparatus (SCBA) depending on airborne concentration.

Ventilation: Local exhaust, general ventilation.

Protective Gloves: Acid resistant rubber or plastic with elbow length gauntlet and rolled over cuff.

Eye Protection: Do not wear contact lenses. Use safety glasses with face shield or acid resistant goggles.

Other Protective Equipment: For Spills: Use acid resistant apron, full body clothing and boots.

SECTION 7 — SPECIAL PRECAUTIONS AND SPILL/LEAK PROCEDURES

Precautions in Handling and Storage: Store in cool, dry, well-ventilated area away from incompatible materials. When mixing with water, pour acid slowly into the water. Keep acid away from fire, sparks and heat.

Other Precautions: Mark containers with appropriate hazard warning labels:
Poison-Causes Severe Burns
Danger-Contains Sulfuric Acid

Material Spills or Release: Stop leak and contain spill if possible without risk. Wear respiratory protection and acid-resistant clothing, including gloves and eye and face protection. Neutralize with alkali such as lime, soda ash or sodium bicarbonate.

Waste Disposal: Dispose of wastes in accordance with applicable local, state, and Federal regulations. Unneutralized electrolyte may require disposal as EPA corrosive waste - D002.