

# Material Safety Data Sheet

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## SECTION I - PRODUCT IDENTIFICATION

**Trade Name:** Sulfuric Acid (approx 70%); Denitrated Sulfuric Acid

**Product Class:** Sulfuric Acid

**Product Appearance & Odor:** Light Green to dark gray liquid. Little odor.

**DOT Hazard Shipping Description:** UN1830 Sulfuric Acid, 8 II RQ\*

\* "RQ" required only if container (drum, rail tank car, etc.) has 1,000 pounds of more of sulfuric acid.

**NFPA Hazard Classification:**

Health (blue) =	3
Flammability (red) =	0
Reactivity (yellow) =	2
Specific Hazard (White) =	No Water

## SECTION II - HAZARDOUS INGREDIENTS

Ingredients:	CAS#	% (Range)	Occupational Exposure Limits	
			ACGIH TLV-TWA	OSHA PEL-TWA
Sulfuric Acid	7664-93-9	68-72	1 mg/m <sup>3</sup> 3 mg/m <sup>3</sup> (STEL)	1 mg/m <sup>3</sup>

Ingredients, other than those mentioned above, as used in this product are not hazardous as defined under current Department of Labor regulations, or are present in deminimus concentrations (less than 0.1% for carcinogens, less than 1.0% for other hazardous materials).

## SECTION III - PHYSICAL DATA

**Boiling Point:** 345°F (174°C)

**Vapor Pressure:** Not Available

**Vapor Density:** (Air=1) 3.0 - 3.4

**Density:** 1.6 g/cc

**Percent Volatile by Volume:** Not Available

**Solubility in Water:** Completely soluble.

**Evaporation Rate (Butyl Acetate = 1):** <1

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## SECTION IV - FIRE AND EXPLOSION HAZARD DATA

**Flash Point:** Not Applicable

**Flammable Limits:** Not Applicable

**Extinguishing Media:** Dry chemical or carbon dioxide.

**Special Fire Fighting Procedures:** Use water spray to cool non-leaking fire-exposed containers and to reduce and knock down vapors. **Do not** use solid water streams near ruptured tanks or spills of sulfuric acid. Acid reacts violently with water and can splatter acid on personnel. Wear self-contained breathing apparatus and full fire fighting protective gear.

**Unusual Fire and Explosion Hazards:** May cause spontaneous combustion when in contact with organic materials. Reacts vigorously with water to generate heat and liberate oxides of sulfur. Reacts with metals to form flammable hydrogen gas.

## SECTION V - HEALTH HAZARD DATA

### Effects of Overexposure

**Eyes:** Will produce very severe, immediate damage and may result in permanent damage.

**Skin:** Will produce immediate, penetrating chemical burns.

**Ingestion:** Will cause chemical burns to digestive tract. Not found to be toxic by oral exposure as defined by OSHA.

**Inhalation:** Highly toxic by inhalation as defined by OSHA. Will cause burning of the eyes, nose, and throat. Extreme inhalation may cause difficult breathing and loss of consciousness. Lung damage may appear after a delay of up to 48 hours after exposure.

**Systemic or Other Effects:** None known.

### Emergency and First Aid Procedures

**Eyes:** Irrigate with running water for at least fifteen minutes. Seek immediate medical attention.

**Skin:** Immediately remove contaminated clothing. Flush with running stream of water for at least fifteen minutes. Wash with soap. Seek medical attention.

**Ingestion:** Do not induce vomiting. Drink three or more glasses of water or milk to dilute acid. Seek immediate medical attention.

**Inhalation:** Remove from exposure immediately. Restore or support respiration. Seek immediate medical attention for unprotected exposures beyond exposure limits.

**Special Considerations:** If exposure to vapors occurs, medical observation should continue for 24-48 hours after exposure. Delayed reactions may cause pulmonary edema.

## SECTION VI - REACTIVITY DATA

**Stability:** Stable under normal conditions.

**Conditions to Avoid:** Avoid exposure to sunlight, which promotes oxide formation.

**Materials to Avoid (Incompatibility):** Bases. Organic and combustible materials. Metal powders. Will corrode most metals. Beware of containers, pumps and hoses of inadequate construction and/or contamination by incompatible chemicals.

**Hazardous Decomposition Products:** Sulfur Oxides (SO<sub>x</sub>)

**Hazardous Polymerization:** Will not occur.

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## SECTION VII - SPILL OR LEAK PROCEDURES

**Steps to be taken in Case Material is Released or Spilled:** Evacuate unnecessary personnel to safe area upwind of spill. Acid vapor is denser than air and will concentrate in low spots. If necessary to enter spill area, wear full protective clothing including boots and proper breathing apparatus. Dike large spills and pump to salvage. If not possible to salvage, neutralize with soda ash or lime. Do not get water in salvage containers since violent reaction may occur. Notify authorities in accordance with emergency response procedures. Only personnel trained in emergency response should respond. Follow Federal, State and local spill reporting requirements.

**Waste Disposal Method:** Disposal must comply with Federal, State and local regulations. If product becomes a waste, it is potentially regulated as a hazardous waste as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR, part 261. Review disposal requirements with a person knowledgeable with applicable environmental law (RCRA) before disposing of any hazardous material.

## SECTION VIII - SPECIAL PROTECTION INFORMATION

**Ventilation:** Mechanical ventilation and/or local exhaust is recommended where needed to meet TLV requirement.

**Respiratory Protection:** For concentrations above the exposure limits, use full face supplied air respirator approved by NIOSH for nitric acid, nitrogen oxide gases or mists, sulfuric acid, and sulfur oxides. **Chemical cartridge or canister respirators are not suitable for nitric acid or nitrogen oxide use.**

**Protective Clothing:** Neoprene or vinyl gloves should be required. Where spill or splash potential exists, rubberized aprons or acid resistant suits are strongly recommended.

**Eye Protection:** Acid proof goggles and face shield should be required where acid is transferred or sampled, or where persons are otherwise potentially exposed.

**Other Precautions Required:** Provide safety showers and eyewashes in immediate vicinity.

## SECTION IX - SPECIAL PRECAUTIONS

**Precautions to be taken in handling and storage:** Store in clean, cool, well-ventilated area away from organic chemicals, bases and metal powders.

**Other Precautions:** Avoid hydrocarbon lubricants and packing materials. Wood structures or other organic material should be avoided within diked area or near acid storage tanks. Corrosion rates are increased at elevated temperatures and by dilution with water. Refer to CMA Data Sheet SD-65 for additional information.

## SECTION X - SPECIAL INFORMATION

This product contains the following substances that are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

<u>Chemical Name</u>	<u>CAS Number</u>	<u>% By Weight</u>
None		

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