

MATERIAL SAFETY DATA SHEET

SECTION I NAME

Product SULFURIC ACID, SOLUTIONS

Chemical Synonyms Concentrations: 1.0, 0.1 Normal

Formula H₂SO₄

Units(s) Size 100, 500 ml, 1 Liter, 4 Liters

C.A.S. No. 7664-93-9

SECTION II HAZARDOUS INGREDIENTS OF MIXTURES

Principal Hazardous Component(s)	%	TLV Units
Sulfuric Acid: 1.0 Normal	4.9%	See Section V
0.1 Normal	0.49%	

CAUTION! MAY CAUSE SKIN IRRITATION
MAY BE HARMFUL IF SWALLOWED.

SECTION III PHYSICAL DATA

Melting Point (°F)	Approx. 0°C (32°F)	Specific Gravity H₂O = 11	1.0 at 20°C
Boiling Point (°F)	Approximately 100°C	Percent Volatile by Volume (%)	95-99.5%
Vapor Pressure (mm Hg)	14 (water)	Evaporation Rate (Ether = 1)	Greater than 1
Vapor Density (Air = 1)	0.7 (water)		
Solubility in Water	Complete		
Appearance and Odor	Clear colorless liquid; no odor.		

SECTION IV FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used)	Non-flammable (NA)	Flammable Limits in Air % by Volume	Lower NA Upper NA
Extinguisher Media	If involved in a fire situation use water spray.		

SPECIAL FIREFIGHTING PROCEDURES

These solutions are very dilute. In fire conditions, wear a NIOSH-approved self-contained breathing apparatus and full protective clothing and eye protection.

UNUSUAL FIRE AND EXPLOSION HAZARDS

Attacks many metals, releasing hydrogen. Fire or excessive heat may produce hazardous decomposition products; can react vigorously with alkali materials.

D.O.T. CORROSIVE MATERIAL, ORM-D, 15% OR LESS

CHEMTREC
800-424-9300
Dist 716-226-6177
Neph 716-334-4222

Health	3
Fire	0
Reactivity	3

NFPA HAZARD RATING
LEAST 0 SLIGHT 1 MODERATE 2 HIGH 3 EXTREME 4



FREY SCIENTIFIC

905 HICKORY LANE MANSFIELD OHIO 44905

MSDS No.
Effective Date

Approved by U.S. Department of Labor "essentially similar" to form OSHA-20

SECTION V HEALTH HAZARD DATA

Threshold Limited Value

TWA: 1 mg/m³ (AIR) (ACGIH 1963-84).

Effects of Overexposure

May be harmful if swallowed. Contact may cause irritation to skin, eyes and mucous membranes.

Emergency and First Aid Procedures

EXTERNAL: Flush with water for 15 minutes.
INTERNAL: Drink large quantities of water, follow with milk of magnesia, vegetable oil or beaten eggs. Call physician.
EYES: Flush with water for 15 minutes. Get prompt medical attention.

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SECTION VI REACTIVITY DATA

Stability	Unstable	Conditions to Avoid
	Stable	Excessive temperature and heat.

Incompatibility (Materials to avoid)

Attacks many metals, bases. Reacts with alkalis.

Hazardous Decomposition Products

When heated to decomposition, may release sulfur dioxide fumes.

Hazardous Polymerization

Will Not Occur

SECTION VII SPILL OR LEAK PROCEDURES

Steps to be taken in case material is released or spilled

Neutralize with sodium bicarbonate (soda ash) and flush to sewer with copious amounts of water.

Waste Disposal Method

Flush neutralized acid to sewer with copious amounts of water.

SECTION VIII SPECIAL PROTECTION INFORMATION

Discharge, treatment, or disposal may be subject to federal, state, or local laws.

Respiration Protection

None needed at room temperatures.

Ventilation

Local Exhaust	None needed	Special	No
Mechanical (General)	None needed	Other	No

Protective Gloves

Rubber

Eye Protection

Chemical safety glasses

SECTION IX SPECIAL PRECAUTIONS

Precautions to be Taken in Handling and Storing

Store in a cool place. Wash thoroughly after handling. Keep container tightly closed when not in use.

Other Precautions

Read label on container before using.

For laboratory use only. Not for drug, food or household use. Keep out of reach of children.

Rev. No. No. 1 **Date** 11/2/87 **Approved** *Alvin D. Powell* **Chemical Safety Coordinator** *CP*