

**MATERIAL SAFETY DATA SHEET**

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**MANUFACTURER:** TAYLOR TECHNOLOGIES, INC  
31 LOVETON CIRCLE  
SPARKS, MD 21152  
TELEPHONE: 410-472-4340

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**1. PRODUCT IDENTIFICATION**

CATALOG NO.: R-0005  
PRODUCT NAME: Acid Demand Reagent (ADR)  
CHEMICAL FAMILY: Inorganic acid solution

**2. INGREDIENTS**

INGREDIENT	CAS NO.	%	NATURE OF HAZARD
Sulfuric acid	7664-93-9	<1	Irritant acid
Deionized water	7732-18-5	to 100	None

**3. PHYSICAL/CHEMICAL CHARACTERISTICS**

STATE: Liquid APPEARANCE: Clear, colorless ODOR: None  
BOILING PT (F): 212 pH: 1.3 SPECIFIC GRAVITY: 1  
VAPOR PRESSURE (mm Hg): 17 VAPOR DENSITY (AIR=1): .6  
PERCENT VOLATILE BY VOLUME: 100 SOLUBILITY IN WATER: Soluble

**4. FIRE, EXPLOSION HAZARD AND REACTIVITY DATA**

FLASH PT: NA METHOD: NA  
FLAMMABLE LIMITS: LEL: NA UEL: NA  
EXTINGUISHING MEDIA: Dry chemical, carbon dioxide  
SPECIAL PROCEDURES: Wear self-contained (positive pressure if available) breathing apparatus and special protective clothing  
FIRE/EXPLOSION HAZARDS AND HAZARDOUS DECOMPOSITION PRODUCTS: May react violently with water. May react with metals to produce hydrogen gas. May ignite combustible materials. May emit toxic fumes of sulfur oxides.  
NFPA CODE: Health: 1 Flammability: 0 Reactivity: 0 Specific: NA  
CONDITIONS TO AVOID: Extreme heat, temperatures. Contact with strong alkali, metals.

**5. HEALTH HAZARD DATA**

INGREDIENT: Sulfuric acid  
TOXICITY: LD50(ori-rat): 2140 mg/kg  
PEL: 1 mg/m<sup>3</sup> TLV: 1 mg/m<sup>3</sup>  
STEL: 3 mg/m<sup>3</sup>  
ROUTE(S) OF ENTRY: Inhalation Ingestion X Skin X  
TARGET ORGAN(S): Eyes, skin  
CARCINOGENICITY: NTP No IARC No OSHA No  
HEALTH HAZARDS AND SYMPTOMS OF EXPOSURE:  
EYES: Irritant. Contact may cause burns.  
SKIN: Irritant. Contact may cause burns.  
INGESTION: Irritant. May cause gastrointestinal irritation.  
INHALATION: NA  
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Eye and skin conditions

**6. PRECAUTIONARY MEASURES**

PROTECTIVE EQUIPMENT: General purpose gloves, safety glasses, lab coat

HANDLING: Avoid contact with eyes, skin, and clothing. Avoid breathing chemical. Wash thoroughly after handling.

STORAGE: Cool, dry area. Avoid direct sunlight.

**7. EMERGENCY AND FIRST AID PROCEDURES**

EYE AND SKIN CONTACT: Immediately flush eyes with water for 20 minutes or until chemical is removed. Call physician. Wash skin thoroughly with soap and water.

INGESTION: Give large amounts of water or large amounts of water with milk of magnesia. Call physician. DO NOT INDUCE VOMITING. DO NOT give anything by mouth to a person who is unconscious, rapidly losing consciousness, or convulsing.

INHALATION: NA

**8. SPILL AND DISPOSAL PROCEDURES**

SPILL OR RELEASE: Neutralize with soda ash. Absorb with vermiculite or other inert material. Containerize for later disposal.

DISPOSAL: Incineration or other method to comply with all local, state, and federal regulations.

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NA = Not applicable

ND = Not determined

NE = Not established

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This Material Safety Data Sheet has been prepared in accordance with 29 CFR Part 1910.1200 and contains information believed to be accurate and complete at the date of preparation. However, no warranty is expressed or implied. Advice given under "Spill and Disposal Procedures" assumes compliance with federal, state, and local regulations regarding the disposal of hazardous waste.

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