

SAFETY DATA SHEET

SECTION 1 - COMPANY AND PRODUCT IDENTIFICATION

PRODUCT

Product Name: DIETHYL SULFATE
Control Number: 00123
Product Description: Sulfuric Acid Diethyl Ester

COMPANY IDENTIFICATION

Supplier: Chemical Distribution Solutions
1125 Oak St. Ste. 303
Conway, AR 72303

24 Hour Emergency Telephone: (800) 424-9300 CHEMTREC
General Information: (501) 978-1111

SECTION 2- HAZARDS IDENTIFICATION

GHS Classification:

[Health]

Acute toxicity, Oral Category 4
Acute toxicity, Inhalation Category 4
Acute toxicity, Dermal Category 3
Skin corrosion Category 1B
Serious eye damage Category 1

[Environmental]

[Physical]

GHS Label elements, including precautionary statements

Pictograms



Signal Word: Danger

Hazard statement(s)

H302 + H332 Harmful if swallowed or if inhaled
H311 Toxic in contact with skin.
H314 Causes severe skin burns and eye damage.
H340 May cause genetic defects.
H350 May cause cancer.

Precautionary statement(s)

P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301 + P330 + P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER or doctor/ physician.

SECTION 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CHEMICAL NAME	CAS Number	%WT
Diethyl Sulfate	64-67-5	100

SECTION 4 - FIRST AID MEASURES

Eyes: Seek immediate medical attention. Do NOT allow victim to rub eyes or keep eyes closed. Extensive irrigation with water is required (at least 30 minutes).

Skin: Seek immediate medical attention. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Destroy contaminated shoes.

Ingestion: Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Seek immediate medical attention.

Inhalation: Seek immediate medical attention. Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. Do NOT use mouth-to-mouth resuscitation. If breathing has ceased apply artificial respiration using oxygen and a suitable mechanical device such as a bag and a mask.

SECTION 5 - FIRE FIGHTING MEASURES

Suitable Extinguishing media: In case of fire, dry chemical, chemical foam, or alcohol-resistant foam.

Hazardous combustion products: During a fire, oxides of carbon and sulfur may be generated by thermal decomposition or combustion.

Fire Fighting Procedures: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear.

Unusual Fire and Explosion Hazards: Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas.

SECTION 6 - ACCIDENTAL RELEASE and DISPOSAL MEASURES

Small Spill: Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.

Large Spill: Absorb with dry earth, sand or other non-combustible material. Do not get water inside container. Do not touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all ignition sources. Be careful that the product is not present at a concentration level above TLV.

SECTION 7 - STORAGE AND HANDLING

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Do not get in eyes, on skin, or on clothing. Keep container tightly closed. Do not ingest or inhale. Discard contaminated shoes.

Storage: Keep container closed when not in use. Store in a cool, dry, well-ventilated area away from incompatible substances. Keep refrigerated. (Store below 4°C/39°F.) Material darkens in color during storage. Store protected from moisture.

SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION

Engineering Controls: Provide adequate mechanical ventilation or other engineering controls to keep the airborne concentrations of vapor or mists below the applicable workplace exposure limits indicated below. The level of protection and types of controls will vary depending upon potential exposure conditions.

Exposure Limits: Diethyl Sulfate 0.2 mg/m³ ACGIH; 1 mg/m³ OSHA

Personal Protective Equipment (PPE):

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133.

Skin: If prolonged or repeated skin contact is likely, wear appropriate protective gloves.

Clothing: Selection of protective clothing depends on work conditions, potential exposure conditions and may include gloves, boots, suits and other protective items.

Respirators: Where adequate ventilation is not available an approved respirator must be worn. Respirator selection, use and maintenance should be in accordance with the requirements of OSHA Respiratory Protection Standard, 29 CFR 1920.134. In confined areas, use a self-contained breathing apparatus.

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SECTION 9- PHYSICAL AND CHEMICAL PROPERTIES

Flash Point: 219 °F
Autoignition Temperature: 816 °F
Boiling Point Range: 406 °F
Melting Point/Freezing Point: -11 °F
Vapor Pressure: <0.3 mmHg
Vapor Density (Air-1): 5.3
Odor/Appearance: Colorless liquid with ethereal odor.

Flammability Limits: Lower 4.6 Upper: no data
Specific Gravity: 1.18
Volatile %: No available data
Evaporation Rate (Water=1): <1
pH: <1
Solubility in Water: negligible

SECTION 10 - STABILITY AND REACTIVITY

Chemical Stability: Stable under normal temperatures and pressures. Decomposed by hot water into monoethyl sulfate (corrosive) and ethanol (flammable).
Conditions to Avoid: Moisture, excess heat.
Incompatibilities with Other Materials: Strong oxidizing agents, strong acids, strong bases.
Hazardous Decomposition Products: Carbon monoxide, oxides of sulfur, carbon dioxide, ethyl alcohol.
Hazardous Polymerization: Has not been reported.

SECTION 11 - TOXICOLOGICAL INFORMATION

Signs and Symptoms of Overexposure:

Skin: May cause redness, pain, and skin burns upon contact.

Eyes: May cause redness, pain, blurred vision, severe irritation, tissue damage.

Inhalation: Is not an expected hazard unless misted or heated to a high temperature. Mist or vapor inhalation can cause irritation to the nose, throat, and upper respiratory tract.

Ingestion: Harmful if swallowed. Product may cause sore throat, abdominal pain, nausea, and burns of the mouth, throat and digestive tract.

Acute oral toxicity:

LD50 rat: 880 mg/kg

Acute inhalation toxicity:

No available data

Acute dermal toxicity:

LD50 rabbit: 706 mg/kg

SECTION 12 - ECOLOGICAL INFORMATION

Aquatic Toxicity: Toxicity to fish data is not available.

Bio-accumulative potential: Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are less toxic than the product itself.

Mobility: 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 dry deposition.

SECTION 13 - DISPOSAL CONSIDERATIONS

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

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SECTION 14 · TRANSPORTATION

U.S. DEPARTMENT OF TRANSPORTATION (Road or Rail):

Proper Shipping Name: Diethyl sulfate
Hazard Class 6.1
UN Number: 1594
Packaging Group: 2

SECTION 15 · REGULATORY INFORMATION

US FEDERAL REGULATIONS

Comprehensive Environmental Response and Liability Act (CERCLA)

SARA 302: No chemicals in this material is subject to the reporting requirements of SARA Title III, Section 302. The reportable quantity (RQ) for this material is 10 pounds.

Toxic Substance Control Act (TSCA): All components of this product are listed on the TSCA inventory list.

SARA Section 311/312 (40 CFR 370) Hazard Categories:

Acute Health Hazard, Chronic Health Hazard

SARA Section 313 (40 CFR 372) Hazard Categories:

The following components are subject to reporting levels established by SARA Title III, Section 313: Diethyl sulfate.

Clean Water Act: None of the chemicals in this product are listed as Hazardous Substances under the CWA

Clean Air Act: This product is listed as a hazardous air pollutant (HAP) under the CAA.

California Prop 65: This product contains Diethyl Sulphate a chemical known by the State of California to cause cancer, birth defects or other reproductive harm.

SECTION 16 · OTHER INFORMATION

MSDS Revision Date: October 2014

National Fire Protection Association (NFPA) Ratings: This information is intended solely for the use of individuals trained in the NFPA system.

Health: 3
Flammability: 1
Reactivity: 1

The data in this Safety Data Sheet relates to the specific material designated and does not relate to its use in combination with any other material or process. The data contained is believed to be correct. However, since conditions of use are outside our control it should not be taken as warranty or representation for which Chemical Distribution Solutions assumes legal responsibility. This information is provided solely for your consideration, investigation, and verification.