

DIMETHYL SULFATE

Synonyms: Dimethyl ester of sulfuric acid, Dimethylsulfate, Methyl sulfate

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/ SYMPTOMS	PREVENTION	FIRST AID/ FIRE FIGHTING
FIRE	Combustible. Gives off irritating or toxic fumes (or gases) in a fire.	NO open flames.	Powder, water spray, foam, carbon dioxide.
EXPLOSION	Above 83°C explosive vapor/air mixtures may be formed.	Above 83°C use a closed system, ventilation.	
EXPOSURE			
EXPOSURE		AVOID ALL CONTACT!	IN ALL CASES CONSULT A DOCTOR!
•INHALATION	Burning sensation. Cough. Headache. Shortness of breath. Sore throat. Symptoms may be delayed (see Notes).	Ventilation or local exhaust	Fresh air, rest. Half-upright position. Artificial respiration if indicated. Refer for medical attention.
•SKIN	MAY BE ABSORBED! Skin burns. Pain. Blisters.	Protective gloves. Protective clothing.	Remove contaminated clothes. Rinse and then wash skin with water and soap. Refer for medical attention.
•EYES	Redness. Pain. Blurred vision. Severe deep burns.	Face shield and eye protection	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
•INGESTION	Abdominal cramps. Burning sensation. Convulsions. Diarrhea. Shock or collapse. Vomiting. (Further see Inhalation).	Do not eat, drink, or smoke during work. Wash hands before eating.	Rinse mouth. Give plenty of water to drink. Refer immediately for medical attention.

Chemical Dangers: The substance decomposes on heating or on burning producing toxic fumes including sulfur oxides. The solution in water is a medium strong acid. Reacts with water to produce sulfuric acid with evolution of heat. Reacts violently with concentrated aqueous ammonia, bases, acids and strong oxidants with risk of fire and explosion.

Physical Dangers: The vapor is heavier than air.

Storage: Incompatibilities and reactivities include strong oxidizers, ammonia solutions [Note: Decomposes in water to sulfuric acid; corrosive to metals.]

Handling, Containment Devices and PPE: Use in exhaust hood with nitrile chemical resistant gloves (if heavy exposure is anticipated contact Safety and Health for other glove options) and chemical goggles. If a splash hazard to the face is present, a face shield is also required.

Waste Disposal: Collect and store in a glass container labeled with the following "Hazardous Waste - Dimethyl Sulfate." Call Safety and Health at x5069 on the Health Science Campus and x3600 on the Main Campus for pick up.

Emergency Spill Procedures and Decontamination: call x 77 on the Health Science Campus and x2600 for Campus Police on the Main Campus.