

Dimethyl Sulfone MSDS

Disclaimer: This Material Safety Data Sheet (MSDS) is provided for informational purposes only and is intended for use by individuals with appropriate technical skills and at their own discretion and risk. The information contained herein is believed to be accurate but is not warranted to be so. Users are responsible for determining the suitability of this information for their particular purposes.

1. Product Name and Identification

- **Product Name:** [Dimethyl Sulfone](#)
- **CAS Number:** 67-71-0
- **Synonyms:** MSM, Methylsulfonylmethane, Sulfonylbismethane
- **Chemical Formula:** C₂H₆O₂S

2. Composition/Ingredients

- **Chemical Name:** Dimethyl Sulfone
- **Purity:** Typically ≥99%
- **Hazardous Component:** No (Not classified as hazardous under most regulations)

3. Hazards Identification

- **Physical Hazards:** Not classified as a physical hazard. It is a combustible solid, but not readily ignited. Dust may form explosive mixtures with air under specific conditions (e.g., high concentration, ignition source).
- **Health Hazards:** Not considered a significant health hazard under normal conditions of use. May cause mild, transient irritation to the eyes or skin upon direct contact. Inhalation of high concentrations of dust may cause minor respiratory tract irritation. Ingestion of large amounts is not expected to cause significant toxic effects.
- **Environmental Hazards:** Not classified as hazardous to the environment. However, large, uncontrolled releases into aquatic environments should be avoided.

4. First Aid Measures

- **Inhalation:** If dust is inhaled, move the person to fresh air. If coughing or other symptoms develop, seek medical advice.
- **Skin Contact:** Wash the affected area with soap and water. If irritation occurs, consult a physician. This is generally not required but is good practice.
- **Eye Contact:** Immediately flush the eyes with plenty of water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. If irritation persists, seek medical attention.

- **Ingestion:** Ingestion of small amounts is not expected to be harmful. If a large amount is swallowed, rinse the mouth with water and seek medical advice as a precaution. Do not induce vomiting unless directed by a medical professional.

5. Handling and Storage

- **Handling:** Use with adequate ventilation to minimize dust generation and accumulation. Avoid contact with eyes. Avoid breathing dust. Practice good housekeeping to prevent dust buildup on surfaces.
- **Storage:** Store in a cool, dry, and well-ventilated area. Keep the container tightly closed when not in use. Store away from strong oxidizing agents.

6. Exposure Controls/Personal Protection

- **Exposure Limits:** No specific occupational exposure limits (OELs) have been established. It is recommended to handle as a nuisance dust (Particulates Not Otherwise Classified).
- **Engineering Controls:** Use general or local exhaust ventilation to keep airborne dust concentrations to a minimum.
- **Personal Protective Equipment (PPE):**
 - **Eye/Face Protection:** Safety glasses are recommended, especially when handling in a way that could generate dust.
 - **Skin Protection:** Gloves are not typically required but may be worn as a good hygienic practice.
 - **Respiratory Protection:** If dust concentrations are high or irritation is experienced, a NIOSH-approved dust mask or respirator is recommended.

7. Physical and Chemical Properties

- **Appearance:** White crystalline solid or powder
- **Odor:** Odorless
- **Boiling Point:** 238°C (460°F)
- **Melting Point:** 107-111°C (225-232°F)
- **Flash Point:** 143°C (289°F) (Closed Cup)
- **Solubility:** Soluble in water.
- **Specific Gravity:** Approximately 1.45 g/cm³
- **Vapor Pressure:** Very low at room temperature.

8. Stability and Reactivity

- **Stability:** Stable under normal temperatures and pressures.
- **Reactivity:** Generally non-reactive.

- **Conditions to Avoid:** Excessive heat and dust generation. Avoid contact with strong ignition sources.
- **Incompatible Materials:** Strong oxidizing agents.
- **Hazardous Decomposition Products:** Upon combustion, can produce toxic gases such as carbon oxides (CO, CO₂) and sulfur oxides (SO_x).

9. Toxicological Information

- **Acute Effects:**
 - **Oral:** Very low toxicity. Large doses would be required to cause adverse effects.
 - **Dermal:** Not expected to cause skin irritation. Not readily absorbed through the skin.
 - **Inhalation:** High concentrations of dust may cause mild mechanical irritation to the respiratory system.
 - **Eyes:** Direct contact with dust can cause mechanical irritation.
- **Chronic Effects:** Not known to cause chronic health effects. It is not listed as a carcinogen by IARC, NTP, or OSHA. It is widely used as a dietary supplement, indicating a low toxicity profile.

10. Disposal Considerations

- **Disposal Method:** Dispose of this material in accordance with all applicable federal, state, and local regulations. This product is not typically considered a hazardous waste. Waste material can often be disposed of in a sanitary landfill.
- **Contaminated Packaging:** Dispose of empty containers in the same manner as the product, or if permissible, they may be recycled or reconditioned. Check local regulations.