



HUANGSHI YUCHENG TRADE CO., LTD

Address (Wuhan branch): No.8 Hongtu Road, Dongxihu District, Wuhan City,
Hubei Province, China. Tel/tax: 86-27-84750716

Material Safety Data Sheet

1. Chemical Product and Company Identification

Product Name: Dimethyl Sulphate (UN: 1595)

Synonym: Dimethyl Sulfate

Chemical Formula: (CH₃)₂SO₄

Supplier name: Huangshi Yucheng Trade Co., Ltd.

Address: 60 room, 6 suit, Lakeshore Centre, Huangshi City, Hubei, China

Emergency contact: +86-714-6403185

2. Composition and Information on Ingredients

Composition:

Name:	CAS # :	% by Weight:
Dimethyl sulphate	77-78-1	99.0

Toxicological Data on Ingredients: Dimethyl sulfate: ORAL (LD50): Acute: 205 mg/kg [Rat]. 140 mg/kg

[Mouse]. VAPOR (LC50): Acute: 45 ppm 4 hour(s) [Rat].

3. Hazards Identification

Potential Acute Health Effects:

Extremely hazardous in case of skin contact (corrosive, irritant), of eye contact (irritant), of inhalation. Very hazardous in case of skin contact (permeator), of ingestion. Liquid or spray mist may produce tissue damage particularly on mucous membranes of eyes, mouth and respiratory tract. Skin contact may produce burns. Inhalation of the spray mist may produce severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath. Severe over-exposure can result in death. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

Potential Chronic Health Effects:

Extremely hazardous in case of skin contact (corrosive, irritant), of eye contact (irritant), of inhalation. Very hazardous in case of skin contact (permeator), of ingestion. CARCINOGENIC EFFECTS: Classified + (PROVEN) by OSHA. Classified A2 (Suspected for human.) by ACGIH, 2A (Probable for human.) by IARC, 2 (Reasonably anticipated.) by NTP. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance is toxic to blood, kidneys, lungs, the nervous system, liver, mucous membranes. Repeated or prolonged exposure to the substance can produce target organs damage. Repeated or prolonged contact with spray mist may produce chronic eye irritation and severe skin irritation. Repeated or prolonged exposure to spray mist may produce respiratory tract irritation leading to frequent attacks of bronchial infection. Repeated exposure to an highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.



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Repeated or prolonged inhalation of vapors may lead to chronic respiratory irritation.

4. First Aid Measures

Eye Contact:

Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Cold water may be used. Do not use an eye ointment. Seek medical attention.

Skin Contact:

If the chemical got onto the clothed portion of the body, remove the contaminated clothes as quickly as possible, protecting your own hands and body. Place the victim under a deluge shower. If the chemical got on the victim's exposed skin, such as the hands : Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. Cold water may be used. If irritation persists, seek medical attention. Wash contaminated clothing before reusing.

Serious Skin Contact:

Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

Inhalation: Allow the victim to rest in a well ventilated area. Seek immediate medical attention.

Serious Inhalation:

Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. **WARNING:** It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek immediate medical attention.

Ingestion:

Do not induce vomiting. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.

Serious Ingestion: Not available.

5. Fire and Explosion Data

Flammability of the Product: Combustible.

Auto-Ignition Temperature: 495°C (923°F)

Flash Points: CLOSED CUP: 83.3°C (181.9°F). (Setaflash) OPEN CUP: 115.6°C (240.1°F).

Flammable Limits: Not available.

Products of Combustion: These products are carbon oxides (CO, CO₂), sulfur oxides (SO₂, SO₃...).

Fire Hazards in Presence of Various Substances: Extremely flammable in presence of open flames and sparks.

Explosion Hazards in Presence of Various Substances:

Risks of explosion of the product in presence of mechanical impact: Not available. Highly explosive



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in presence of open flames and sparks.

Fire Fighting Media and Instructions:

SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Special Remarks on Fire Hazards: Not available.

Special Remarks on Explosion Hazards: Not available.

6. Accidental Release 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:

Combustible material. Corrosive liquid. Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not get water inside container. Do not touch spilled material. Use water spray curtain to divert vapor drift. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all ignition sources. Call for assistance on disposal. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

7. Handling and Storage

Precautions:

Keep locked up Keep container dry. Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapour/spray. Never add water to this product In case of insufficient ventilation, wear suitable respiratory equipment If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes.

Storage:

Flammable materials should be stored in a separate safety storage cabinet or room. Keep away from heat. Keep away from sources of ignition. Keep container tightly closed. Keep in a cool, well-ventilated place. Ground all equipment containing material. Keep container dry. Keep in a cool place.

8. Personal Protection

PROTECTION MASK / WORKING CLOTHES / GLOVES

Engineering Controls:

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection:

Face shield. Full suit. Vapor respirator. Be sure to use an approved/certified respirator or equivalent.

Gloves. Boots. Personal Protection in Case of a Large Spill:

Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be



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sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:

TWA: 0.1 (ppm) from ACGIH (TLV) TWA: 0.5 (mg/m³) from ACGIH Consult local authorities for acceptable exposure limits.

9. Physical and Chemical Properties:

Chemical Formula: (CH₃)₂SO₄

Molecular Weight: 126.13 g/mole

Density: 1.136~1.142

Color: Colorless

Water/Oil Dist. Coeff.: The product is equally soluble in oil and water; log(oil/water) = 0

SPECIFIC GRAVITY 1.3322 (Water = 1)

BOILING POINT: Decomposes. (188°C or 370.4°F) FREEZING POINT: -27°C

REFRACTIVE INDEX: (20/D) 1.3874 SELF-IGNITE TEMPERATURE: 495°C (923°F)

10. Stability and Reactivity:

STABILITY:

Shock and heat sensitive. Thermally unstable. Reacts violently with a broad range of materials, contact with organic bases (amines), acids, and some metal oxides such as lead pigments, may markedly increase its sensitivity to detonation by shock.

Hazardous decomposition products:

Burning may produce carbon monoxide, carbon dioxide, nitrogen oxides.

Hazardous polymerization: will not occur incompatibilities: amines, acids, bases, oxidizing materials, metal oxides, aluminum chloride plus organic matter. Slowly corrodes steel and copper when wet. nitromethane in the presence of water can react with organic bases to form salts which are explosive when dry.

11. Toxicological Information

TOXICOLOGICAL DATE: oral rat ld₅₀:940mg/kg

CARCINOGENICITY: some evidence of carcinogenicity was noted in ntp tests. the effects were mammary tumors in female rats and benign haderian gland tumors in mice.

12. Ecological Information:

ENVIRONMENTAL FATE: when released into the soil, this materials may leach into groundwater.

ENVIRONMENTAL TOXICITY: no information found

13. Disposal Consideration:

Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA approved incinerator or disposed in a RCRA approved waste facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations.



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14. Transport Information:

PROPER SHIPPING NAME: Dimethyl sulphate

HAZARD CLASS: 6.1

UN: 1595

PACKING GROUP: I

15. Regular Information

Conforms to industry standard

This MSDS has been prepared according to the hazard criteria of the controlled products regulations (CFR) and the MSDS contains all of the information required by the CFR.

16. Other Information

The above declaration of material safety data sheet is created according to the knowledge that we know till now. Imperfection may exist, which is out of our research now. Improvements will be made to complete this MSDS in future.