



Dimethyl Disulfide Material Safety Data Sheet

Section 1 - Chemical Product and Company Identification Product

Name: Methyl disulfide, p.a.

Synonyms: Dimethyl disulfide

Company Identification: Liaoning DMSO Chemicals Co., Ltd

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Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name:	%	EINECS#
624-92-0	Methyl disulfide	99.5	210-871-0

Hazard Symbols: T+ F N

Risk Phrases: 11 22 26 36/37/38 51/53

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Highly flammable. Harmful if swallowed. Very toxic by inhalation. Irritating to eyes, respiratory system and skin. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Potential Health Effects Eye:

Causes eye irritation.

Skin: Causes skin irritation. May be harmful if absorbed through the skin. Ingestion:

Harmful if swallowed. May cause irritation of the digestive tract. Inhalation: May be fatal if inhaled. Causes respiratory tract irritation.

Section 4 - First Aid Measures

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately. Skin: Get medical aid immediately. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.

Ingestion: Get medical aid immediately. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.

Inhalation: Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors can travel to a source of ignition and flash back. Will burn if involved in a fire. Flammable liquid and vapor.



Extinguishing Media: Use water spray to cool fire-exposed containers. Use water spray, dry chemical, carbon dioxide, or chemical foam.

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Do not flush into a sewer. Remove all sources of ignition. Use a spark-proof tool.

Section 7 - Handling and Storage

Handling: Use spark-proof tools and explosion proof equipment. Do not get on skin and clothing. Do not breathe dust, vapor, mist, or gas. Use only in a chemical fume hood.

Storage: Keep away from sources of ignition. Store in a cool, dry place. Store in a tightly closed container. Flammables-area. Storage temperature: -10~+40 °C

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local explosion-proof ventilation to keep airborne levels to acceptable levels.

Personal Protective Equipment

Eyes: Wear chemical splash goggles.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear butyl rubber, nitrile gloves and suits to prevent skin exposure.

Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Exposure limits:

Dimethyl Disulfide

ACGIH Skin designator: Y ACGIH TWA

: ACGIH TWA

: 0.5ppm

Section 9 - Physical and Chemical Properties

Physical State: Clear liquid

Color: clear colorless to slightly yellow - yellow

Odor: stench

pH: Not available

Vapor Pressure: 37 hPa @ 25 deg C

Viscosity: 0.62 mPa.s 20 deg C

Boiling Point: 108 - 110 deg C @ 760 mmHg

Freezing/Melting Point: -85 deg C (-121.00°F)

Autoignition Temperature: Not available

Flash Point: 16 deg C

Explosion Limits: Lower: 1.10 vol %



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Explosion Limits: Upper: 16.00 vol %
Decomposition Temperature: 390 deg F
Solubility in water: Not available.

Specific Gravity/Density: 1.0625g/cm³
Molecular Formula: (CH₃)₂S₂
Molecular Weight: 94.19

Section 10 - Stability and Reactivity

Chemical Stability: Stable.

Conditions to Avoid: Incompatible materials, ignition sources.

Incompatibilities with Other Materials Strong oxidizing agents, strong reducing agents, strong bases.

Hazardous Decomposition Products Carbon monoxide, oxides of sulfur, carbon dioxide, hydrogen sulfide.

Hazardous Polymerization Will not occur.

Section 11 - Toxicological Information

Data on this material and/or its components are summarized below:

Single exposure(acute)studies indicate:

Oral – Moderately Toxic to Rats(290 mg/kg <LD₅₀<500 mg/kg)

Dermal – No more than Slightly Toxic to Rabbits(LD₅₀>2,000 mg/kg)

Inhalation – Slightly Toxic to Rats(4-hr LC₅₀ 1310 ppm)

Eye Irritation – Slightly Irritating to Rabbits(7.2/110)

Skin Irritation – Slightly Irritating to Rabbits(4 – hr exposure, 2.9/8.0) No mortality was seen in rabbits following a single application to the skin, although rapid onset of eye irritation, central nervous system and respiratory signs were noted. These effects disappeared within a day after application. No skin allergy was observed in guinea pigs following repeated exposure. Following repeated application to the skin of rabbits, severe skin irritation and necrosis, transient lethargy, increased mortality, spasms, and effects on the heart and red blood cells were observed. Following repeated inhalation exposure, irritation of the eyes, nose and respiratory tract were the most significant effects reported. Reduced body weights, slight effects on blood cells and some clinical chemistry parameters, and microscopic changes in the nose and spleen were also observed in some studies. No neurotoxic effects were observed. No birth defects were observed in the offspring of rats and rabbits exposed by inhalation during pregnancy, but slightly effects on the development of offspring and adverse effects on the mothers were reported in the study with rats. No adverse effects were observed when rats were exposed by inhalation for two successive generations. No genetic changes were observed in standard tests using bacteria, animal cells, or animals.

Section 12 - Ecological Information

Ecotoxicity: Daphnia: EC₅₀: 7 mg/l; 48H;

Other: Not readily biodegradable. Do not empty into drains.log Pow: 1.77

Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.



Section 14 - Transport Information

	IATA	IMO	RID/ADR
Shipping Name:	Dimethyl Disulphide	Dimethyl Disulphide	Dimethyl Disulphide
Hazard Class:	3	3	3
UN Number:	2381	2381	2381
Packing Group:	II	II	II

Section 15 - Regulatory Information European/International Regulations

European Labeling in Accordance with EC Directives Hazard

Symbols: T+ F N

Risk Phrases:

R 11 Highly flammable.

R 22 Harmful if swallowed.

R 26 Very toxic by inhalation.

R 36/37/38 Irritating to eyes, respiratory system and skin.

R 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety Phrases:

S 16 Keep away from sources of ignition - No smoking.

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 28A After contact with skin, wash immediately with plenty of water.

S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

S 38 In case of insufficient ventilation, wear suitable respiratory equipment.

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S 61 Avoid release to the environment. Refer to special instructions/safety data sheets.

WGK (Water Danger/Protection)

CAS# 624-92-0: 2

Canada CAS# 624-92-0 is listed on Canada's DSL List

US Federal

TSCA CAS# 624-92-0 is listed on the TSCA Inventory.

Section 16 - Other Information

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any



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