

Safety Data Sheet



1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: DIMETHYL DISULFIDE

Other name(s): Dimethyl disulphide; Methyl disulfide; Methyl disulphide; DMDS.

Recommended Use of the Chemical and Restrictions on Use Solvent.

Supplier: Ixom Operations Pty Ltd
ABN: 51 600 546 512
Street Address: Level 8, 1 Nicholson Street
East Melbourne Victoria 3002
Australia

Telephone Number: +61 3 9906 3000
Emergency Telephone: 1 800 033 111 (ALL HOURS)

Please ensure you refer to the limitations of this Safety Data Sheet as set out in the "Other Information" section at the end of this Data Sheet.

2. HAZARDS IDENTIFICATION

Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail; DANGEROUS GOODS.

This material is hazardous according to Safe Work Australia; HAZARDOUS CHEMICAL.

Classification of the chemical:

Flammable liquids - Category 2
Acute Oral Toxicity - Category 4
Acute Dermal Toxicity - Category 4
Skin Irritation - Category 2
Eye Irritation - Category 2A
Acute Inhalation Toxicity - Category 3
Specific target organ toxicity (single exposure) - Category 3
Acute Aquatic Toxicity - Category 2
Chronic Aquatic Toxicity - Category 2

SIGNAL WORD: DANGER



Hazard Statement(s):

H225 Highly flammable liquid and vapour.
H302+H312 Harmful if swallowed or in contact with skin.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H331 Toxic if inhaled.
H335 May cause respiratory irritation.
H411 Toxic to aquatic life with long lasting effects.

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Precautionary Statement(s):

Prevention:

P210 Keep away from heat, sparks, open flames, hot surfaces. No smoking.
P233 Keep container tightly closed.
P240 Ground or bond container and receiving equipment.
P241 Use explosion-proof electrical, ventilating, lighting equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P261 Avoid breathing dust / fume / gas / mist / vapours / spray.
P264 Wash hands thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P273 Avoid release to the environment.
P280 Wear protective gloves / protective clothing / eye protection / face protection.

Response:

P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P330 Rinse mouth.
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P321 Specific treatment (see First Aid Measures on Safety Data Sheet).
P322 Specific measures (see First Aid Measures on Safety Data Sheet).
P332+P313 If skin irritation occurs: Get medical advice/attention.
P362 Take off contaminated clothing and wash before reuse.
P363 Wash contaminated clothing before re-use.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P311 Call a POISON CENTER or doctor/physician.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 If eye irritation persists: Get medical advice/attention.
P370+P378 In case of fire: Use extinguishing media as outlined in Section 5 of this Safety Data Sheet to extinguish.
P391 Collect spillage.

Storage:

P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P403+P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.

Disposal:

P501 Dispose of contents and container in accordance with local, regional, national, international regulations.

Poisons Schedule (SUSMP): None allocated.

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Components	CAS Number	Proportion	Hazard Codes
Dimethyl disulphide	624-92-0	>=99.5%	H225 H302 H312 H315 H319 H331 H335 H411

4. FIRST AID MEASURES

For advice, contact a Poisons Information Centre (e.g. phone Australia 131 126; New Zealand 0800 764 766) or a doctor.

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Inhalation:

Remove victim from area of exposure - avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. If patient finds breathing difficult and develops a bluish discolouration of the skin (which suggests a lack of oxygen in the blood - cyanosis), ensure airways are clear of any obstruction and have a qualified person give oxygen through a face mask. Apply artificial respiration if patient is not breathing. Seek immediate medical advice.

Skin Contact:

If skin or hair contact occurs, immediately remove any contaminated clothing and wash skin and hair thoroughly with running water. If swelling, redness, blistering or irritation occurs seek medical assistance.

Eye Contact:

If in eyes, hold eyelids apart and flush the eye continuously with running water. Continue flushing until advised to stop by a Poisons Information Centre or a doctor, or for at least 15 minutes.

Ingestion:

Rinse mouth with water. If swallowed, give a glass of water to drink. If vomiting occurs give further water. Seek immediate medical assistance.

Indication of immediate medical attention and special treatment needed:

Treat symptomatically.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media:

Normal foam, dry agent (carbon dioxide, dry chemical powder).

Hazchem or Emergency Action Code: 3WE

Specific hazards arising from the chemical:

Highly flammable liquid. Vapour may travel a considerable distance to source of ignition and flash back. Environmentally hazardous.

Special protective equipment and precautions for fire-fighters:

Heating can cause expansion or decomposition of the material, which can lead to the containers exploding. If safe to do so, remove containers from the path of fire. On burning will emit toxic fumes. Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to vapour or products of combustion.

6. ACCIDENTAL RELEASE MEASURES

Emergency procedures/Environmental precautions:

Shut off all possible sources of ignition. Clear area of all unprotected personnel. Do not allow container or product to get into drains, sewers, streams or ponds. If contamination of sewers or waterways has occurred advise local emergency services.

Personal precautions/Protective equipment/Methods and materials for containment and cleaning up:

Slippery when spilt. Avoid accidents, clean up immediately. Wear protective equipment to prevent skin and eye contact and breathing in vapours. Work up wind or increase ventilation. Contain - prevent run off into drains and waterways. Use absorbent (soil, sand or other inert material). Collect and seal in properly labelled containers or drums for disposal. Use non-sparking tools.

7. HANDLING AND STORAGE

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Precautions for safe handling:

Avoid skin and eye contact and breathing in vapour, mists and aerosols. All potential sources of ignition (open flames, pilot lights, furnaces, spark producing switches and electrical equipment etc) must be eliminated both in and near the work area. Do NOT smoke. Take precautionary measures against static discharges.

Conditions for safe storage, including any incompatibilities:

Store in a cool, dry, well ventilated place and out of direct sunlight. Store away from sources of heat or ignition. Store away from incompatible materials described in Section 10. Keep containers closed when not in use - check regularly for leaks.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters: No value assigned for this specific material by Safe Work Australia.

Appropriate engineering controls:

Use in well ventilated areas. Keep containers closed when not in use.

Individual protection measures, such as Personal Protective Equipment (PPE):

The selection of PPE is dependent on a detailed risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods, and environmental factors.

OVERALLS, SAFETY SHOES, CHEMICAL GOGGLES, GLOVES, RESPIRATOR.



Wear overalls, chemical goggles and impervious gloves. Use with adequate ventilation. If determined by a risk assessment an inhalation risk exists, wear an organic vapour/particulate respirator or an air supplied mask meeting the requirements of AS/NZS 1715 and AS/NZS 1716. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Liquid
Colour:	Light Yellow
Odour:	Unpleasant
Molecular Formula:	C ₂ H ₈ S ₂
Solubility:	Practically immiscible in water.
Specific Gravity:	1.046 @25°C (lit.)
Relative Vapour Density (air=1):	3.25
Vapour Pressure (20 °C):	22 hPa
Flash Point (°C):	15 (Closed Cup)
Flammability Limits (%):	1.1 - 16.1 (volume in air)
Autoignition Temperature (°C):	Not available
Boiling Point/Range (°C):	108-110
pH:	Not available
Freezing Point/Range (°C):	-84.72

10. STABILITY AND REACTIVITY

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Reactivity:	No information available.
Chemical stability:	Stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.
Possibility of hazardous reactions:	None known.
Conditions to avoid:	Avoid exposure to heat, sources of ignition, and open flame. Avoid exposure to moisture. Avoid exposure to direct sunlight.
Incompatible materials:	Incompatible with strong oxidising agents , strong acids , amines , bases , hydrogen fluoride , moisture , strong reducing agents , steel , ethylvinyl ether , iron , copper , brass , lead .
Hazardous decomposition products:	Oxides of carbon. Oxides of sulfur. Hydrogen sulfide.

11. TOXICOLOGICAL INFORMATION

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

Ingestion:	Swallowing can result in nausea, vomiting and central nervous system depression. If the victim is showing signs of central system depression (like those of drunkenness) there is greater likelihood of the patient breathing in vomit and causing damage to the lungs. Breathing in vomit may lead to aspiration pneumonia (inflammation of the lung).
Eye contact:	An eye irritant.
Skin contact:	Contact with skin will result in irritation.
Inhalation:	Breathing in vapour will produce respiratory irritation. Breathing in vapour can result in headaches, dizziness, drowsiness, and possible nausea. Breathing in high concentrations can produce central nervous system depression, which can lead to loss of co-ordination, impaired judgement and if exposure is prolonged, unconsciousness.

Acute toxicity:

Oral LD50 (rat): >300 mg/kg

Inhalation LC50 (rat): 1167-1471 ppm/4hr

Chronic effects: Not listed as carcinogenic according to the International Agency for Research on Cancer (IARC).

Aspiration hazard: No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity	Avoid contaminating waterways.
Persistence/degradability:	Not readily biodegradable.
Bioaccumulative potential:	No information available.
Mobility in soil:	No information available.

Product Name: DIMETHYL DISULFIDE
Substance No: 000030420401

Issued: 21/12/2017
Version: 3

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Aquatic toxicity: Toxic to aquatic organisms. May cause long lasting harmful effects to aquatic life.
48hr EC50 (Daphnia magna): 7 mg/L
96hr LC50 (fish): 1.75 mg/L (Atlantic salmon)

13. DISPOSAL CONSIDERATIONS

Disposal methods:
Refer to Waste Management Authority. Dispose of contents and container in accordance with local, regional, national, international regulations.

14. TRANSPORT INFORMATION

Road and Rail Transport

Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail; DANGEROUS GOODS.



UN No: 2381
Transport Hazard Class: 3 Flammable Liquid
Subrisk 1: 6.1 Toxic
Packing Group: II
Proper Shipping Name or Technical Name: DIMETHYL DISULPHIDE
Hazchem or Emergency Action Code: 3WE

Marine Transport

Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; DANGEROUS GOODS.

UN No: 2381
Transport Hazard Class: 3 Flammable Liquid
Subrisk 1: 6.1 Toxic
Packing Group: II
Proper Shipping Name or Technical Name: DIMETHYL DISULPHIDE

IMDG EMS Fire: F-E
IMDG EMS Spill: S-D

Marine Pollutant: Yes

Air Transport

Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air; DANGEROUS GOODS. TRANSPORT PROHIBITED under the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air in Passenger and Cargo Aircraft, and Cargo Aircraft Only.

UN No: 2381
Transport Hazard Class: 3 Flammable Liquid
Subrisk 1: 6.1 Toxic

Product Name: DIMETHYL DISULFIDE
Substance No: 000030420401

Issued: 21/12/2017
Version: 3

Safety Data Sheet



Packing Group: II
Proper Shipping Name or Technical Name: DIMETHYL DISULPHIDE

15. REGULATORY INFORMATION

Classification:

This material is hazardous according to Safe Work Australia; HAZARDOUS CHEMICAL.

Classification of the chemical:

Flammable liquids - Category 2
Acute Oral Toxicity - Category 4
Acute Dermal Toxicity - Category 4
Skin Irritation - Category 2
Eye Irritation - Category 2A
Acute Inhalation Toxicity - Category 3
Specific target organ toxicity (single exposure) - Category 3
Acute Aquatic Toxicity - Category 2
Chronic Aquatic Toxicity - Category 2

Hazard Statement(s):

H225 Highly flammable liquid and vapour.
H302+H312 Harmful if swallowed or in contact with skin.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H331 Toxic if inhaled.
H335 May cause respiratory irritation.
H411 Toxic to aquatic life with long lasting effects.

Poisons Schedule (SUSMP): None allocated.

This material is listed on the Australian Inventory of Chemical Substances (AICS).

16. OTHER INFORMATION

Supplier Safety Data Sheet; 05/ 2014.

Reason(s) for Issue:

5 Yearly Revised Primary SDS
Change in Hazardous Chemical Classification
Change to Transport Information
Change in Physical Properties

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This SDS summarises to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. Since Ixom Operations Pty Ltd cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material.

If clarification or further information is needed, the user should contact their Ixom representative or Ixom Operations Pty Ltd at the contact details on page 1.

Ixom Operations Pty Ltd's responsibility for the material as sold is subject to the terms and conditions of sale, a copy of which is available upon request.