

Safety Data Sheet



1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: METHYLENE CHLORIDE

Other name(s): Dichloromethane; Methylene dichloride; Methane, dichloro-; R30; DCM; Methylene Chloride P; Methylene Chloride - Recovered.

Recommended Use of the Chemical and Restrictions on Use Solvent.

Supplier: Ixom Operations Pty Ltd (Incorporated in Australia)
NZBN: 9429041465226
Street Address: 166 Totara Street
Mt Maunganui South
New Zealand

Telephone Number: +64 9 368 2700
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Emergency Telephone: **0 800 734 607 (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 a Dangerous Good according to NZS 5433:2012 Transport of Dangerous Goods on Land.

Classified as hazardous according to criteria in the Hazardous Substances (Minimum Degrees of Hazard) Notice 2017 and the Hazardous Substances (Classification) Notice 2017.

SIGNAL WORD: WARNING

Subclasses:

Subclass 6.1 Category D - Substances which are acutely toxic.
Subclass 6.3 Category A - Substances that are irritating to the skin.
Subclass 6.4 Category A - Substances that are irritating to the eye.
Subclass 6.7 Category B - Substances that are suspected human carcinogens.
Subclass 6.9 Category B - Substances that are harmful to human target organs or systems.
Subclass 9.3 Category C - Substances that are harmful to terrestrial vertebrates.

Approval Number: HSR001540



Hazard Statement(s):

H302 Harmful if swallowed.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H351 Suspected of causing cancer.
H373 May cause damage to organs through prolonged or repeated exposure.
H433 Harmful to terrestrial vertebrates.

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Precautionary Statement(s):

Prevention:

P102 Keep out of reach of children.
P103 Read label before use.
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breathe mist/vapours/spray.
P264 Wash hands thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P281 Use personal protective equipment as required.
P273 Avoid release to the environment.

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.
P332+P313 If skin irritation occurs: Get medical advice/attention.
P362 Take off contaminated clothing before re-use.
P321 Specific treatment (see First Aid Measures on the Safety Data Sheet).
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.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P314 Get medical advice/attention if you feel unwell.

Storage:

P405 Store locked up.

Disposal:

P501 In case of a substance that is in compliance with a HSNO approval other than a Part 6A (Group Standards) approval, a label must provide a description of one or more appropriate and achievable methods for the disposal of a substance in accordance with the Hazardous Substances (Disposal) Notice 2017. This may also include any method of disposal that must be avoided.

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Components	CAS Number	Proportion	Hazard Codes
Methylene chloride	75-09-2	>99%	H315 H319 H336 H351

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.

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 and soap. This material can be absorbed through the skin with resultant adverse effects. Seek immediate medical assistance.

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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, do NOT induce vomiting. Give a glass of water. Avoid giving milk or oils. Seek immediate medical assistance. Give activated charcoal/water slurry.

Indication of immediate medical attention and special treatment needed:

Treat symptomatically. Adrenaline and similar sympathomimetic drugs should be avoided following exposure as cardiac arrhythmia may result with possible subsequent cardiac arrest.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media:

Not combustible, however, if material is involved in a fire use: Fine water spray, normal foam, dry agent (carbon dioxide, dry chemical powder).

Hazchem or Emergency Action Code: 2Z

Specific hazards arising from the chemical:

Non-combustible material. In use may form flammable/explosive vapour-air mixture.

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. Keep containers cool with water spray. Decomposes on heating emitting toxic fumes, including those of hydrogen chloride and phosgene. Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to products of decomposition.

6. ACCIDENTAL RELEASE MEASURES

Emergency procedures/Environmental precautions:

Clear area of all unprotected personnel. Ventilate spill area. Cover spillage with foam to reduce evaporation. If contamination of sewers or waterways has occurred advise local emergency services.

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

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.

7. HANDLING AND STORAGE

Precautions for safe handling: Avoid skin and eye contact and breathing in vapour, mists and aerosols. Keep out of reach of children. Wash hands before breaks and at the end of the work day.

Conditions for safe storage, including any incompatibilities: Store in a cool, dry, well ventilated place and out of direct sunlight. Store between 15°C and 25°C. Store away from foodstuffs. Store away from incompatible materials described in Section 10. Do not store in aluminium containers. Keep containers closed when not in use - check regularly for leaks.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Methylene chloride: WES-TWA 50 ppm, 174 mg/m³, 6.7B Suspected human carcinogen

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As published by the New Zealand Workplace Health & Safety Authority.

WES - TWA (Workplace Exposure Standard - Time Weighted Average) - The eight-hour, time-weighted average exposure standard is designed to protect the worker from the effects of long-term exposure.

Carcinogen Category 6.7B - Suspected human carcinogen.

These Workplace Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These workplace exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

Appropriate engineering controls:

Ensure ventilation is adequate to maintain air concentrations below Workplace Exposure Standards. Vapour heavier than air - prevent concentration in hollows or sumps. DO NOT enter confined spaces where vapour may have collected. Keep containers closed when not in use.

If in the handling and application of this material, safe exposure levels could be exceeded, the use of engineering controls such as local exhaust ventilation must be considered and the results documented. If achieving safe exposure levels does not require engineering controls, then a detailed and documented risk assessment using the relevant Personal Protective Equipment (PPE) (refer to PPE section below) as a basis must be carried out to determine the minimum PPE requirements.

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 respirator 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:	Colourless
Odour:	Sharp Penetrating
Odour Threshold:	ca. 200 ppm
Molecular Formula:	CH ₂ Cl ₂
Solubility:	Slightly soluble in water.
Specific Gravity:	1.32
Relative Vapour Density (air=1):	2.93
Vapour Pressure (20 °C):	473 hPa

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Flash Point (°C):	None
Flammability Limits (%):	13-22
Autoignition Temperature (°C):	605
Solubility in water (g/L):	13.2 @25°C
Boiling Point/Range (°C):	40
Decomposition Point (°C):	>120
pH:	Not available
Viscosity:	0.42 mPa.s @25°C
Freezing Point/Range (°C):	-95

10. STABILITY AND REACTIVITY

Reactivity:	Explosible with air in a vaporous/gaseous state when heated.
Chemical stability:	Sensitive to heat. Sensitive to light. May react on prolonged contact with aluminium or light alloys releasing gas and causing subsequent pressure build up.
Possibility of hazardous reactions:	Risk of explosion with: Alkali metals, aluminium, nitrogen oxides, nitrogen dioxide, potassium, sodium azide, perchloric acid, nitric acid, oxygen, aromatic hydrocarbons. Exothermic reaction with: Alkaline earth metals, powdered metals, amides, alcoholates, non-metallic oxides.
Conditions to avoid:	Avoid exposure to heat. Avoid exposure to light. Avoid exposure to moisture.
Incompatible materials:	Incompatible with powdered aluminium, amines, nitric acid, lithium, sodium, potassium, potassium tert-butoxide, metals, rubber.
Hazardous decomposition products:	Hydrogen chloride. Oxides of carbon. Phosgene.

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.
Eye contact:	An eye irritant.
Skin contact:	Contact with skin will result in irritation. Will have a degreasing action on the skin. Repeated or prolonged skin contact may lead to irritant contact dermatitis. Can be absorbed through the skin with resultant adverse effects.
Inhalation:	Material may be irritant to the mucous membranes of the respiratory tract (airways). 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. Breathing in high concentrations may result in an irregular heart beat and prove suddenly fatal.

Acute toxicity:

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Oral LD50 (rat): >2000 mg/kg
Dermal LD50 (rat): >2000 mg/kg
Inhalation LC50 (mice): 56230 mg/m³/8hr

Skin corrosion/irritation: Irritant (rabbit).
Serious eye damage/irritation: Moderate irritant (rabbit).
Respiratory or skin sensitisation: Not classified.

Chronic effects: Available evidence from animal studies indicate that repeated or prolonged exposure to this material could result in effects on the liver and kidneys. Some animal test data suggests a carcinogenic potential for this material. These particular data sets are not considered relevant to normal industrial use but do emphasise the need for care in handling.

Mutagenicity: Not classified.
Carcinogenicity: Suspected of causing cancer.
Reproductive toxicity: Not classified.
Specific Target Organ Toxicity (STOT) - single exposure: May cause drowsiness and dizziness.
Specific Target Organ Toxicity (STOT) - repeated exposure: Not classified.
Aspiration hazard: Not an aspiration hazard.

Methylene chloride is converted to carbon monoxide in the body which reduces the oxygen carrying capacity of the blood. This is reflected in raised carboxyhaemoglobin levels in the blood.

A chronic inhalation study in mice has shown that methylene chloride is carcinogenic in this species. Malignant tumours were observed in both the liver and lung at levels well above the occupational Exposure Standard.

However, additional studies in the mouse, rat and hamster have shown no significant evidence of a carcinogenic effect. The effect in mice is considered specific to this species and is unlikely to occur in humans. This is due to well established differences in the metabolic pathways between rodents and humans.

Several major studies in human workers have shown no causal relationship between exposure to methylene chloride and an increase in the incidence of cancer.

This material has been classified by the International Agency for Research on Cancer (IARC) as a Group 2A. Group 2A - The agent is probably carcinogenic to humans.

12. ECOLOGICAL INFORMATION

Ecotoxicity Avoid contaminating sewers or drains.
Persistence/degradability: Not readily biodegradable.
Bioaccumulative potential: This product shows a low bioaccumulation potential.
Mobility in soil: No information available.
Log Octanol/Water Partition Coefficient: 1.25 @20°C
48hr EC50 (Daphnia magna): 1682 mg/L
96hr LC50 (fathead minnow): 193 mg/L

13. DISPOSAL CONSIDERATIONS

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Disposal methods:

Refer to local government authority for disposal recommendations. Dispose of contents/container in accordance with local/regional/national/international regulations.

14. TRANSPORT INFORMATION

Road and Rail Transport

Classified as a Dangerous Good according to NZS 5433:2012 Transport of Dangerous Goods on Land.



UN No: 1593
Transport Hazard Class: 6.1 Toxic
Packing Group: III
Proper Shipping Name or Technical Name: DICHLOROMETHANE
Hazchem or Emergency Action Code: 2Z

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: 1593
Transport Hazard Class: 6.1 Toxic
Packing Group: III
Proper Shipping Name or Technical Name: DICHLOROMETHANE

IMDG EMS Fire: F-A
IMDG EMS Spill: S-A

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.

UN No: 1593
Transport Hazard Class: 6.1 Toxic
Packing Group: III
Proper Shipping Name or Technical Name: DICHLOROMETHANE

15. REGULATORY INFORMATION

Classification:

Classified as hazardous according to criteria in the Hazardous Substances (Minimum Degrees of Hazard) Notice 2017 and the Hazardous Substances (Classification) Notice 2017.

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Subclasses:

- Subclass 6.1 Category D - Substances which are acutely toxic.
- Subclass 6.3 Category A - Substances that are irritating to the skin.
- Subclass 6.4 Category A - Substances that are irritating to the eye.
- Subclass 6.7 Category B - Substances that are suspected human carcinogens.
- Subclass 6.9 Category B - Substances that are harmful to human target organs or systems.
- Subclass 9.3 Category C - Substances that are harmful to terrestrial vertebrates.

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- H315 Causes skin irritation.
- H319 Causes serious eye irritation.
- H351 Suspected of causing cancer.
- H373 May cause damage to organs through prolonged or repeated exposure.
- H433 Harmful to terrestrial vertebrates.

16. OTHER INFORMATION

Supplier Safety Data Sheet; 06/ 2019.

This safety data sheet has been prepared by Ixom Operations Pty Ltd (Toxicology & SDS Services).

Reason(s) for Issue:

- Revised Primary SDS
- Change in Hazardous Chemical Classification

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.