

## SAFETY DATA SHEET

# 066

### 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

#### 1.1 Product identifier

**Product name** METHYL CHLORIDE  
**Synonym(s)** 066 - SDS NUMBER • CHLOROMETHANE • PRODUCT CODE: 160 • R40

#### 1.2 Uses and uses advised against

**Use(s)** CALIBRATION • INDUSTRIAL APPLICATIONS

#### 1.3 Details of the supplier of the product

**Supplier name** BOC LIMITED (AUSTRALIA)  
**Address** 10 Julius Avenue, North Ryde, NSW, 2113, AUSTRALIA  
**Telephone** 131 262, (02) 8874 4400  
**Fax** 132 427 (24 hours)  
**Website** <http://www.boc.com.au>

#### 1.4 Emergency telephone number(s)

**Emergency** 1800 653 572 (24/7) (Australia only)

### 2. HAZARDS IDENTIFICATION

#### 2.1 Classification of the substance or mixture

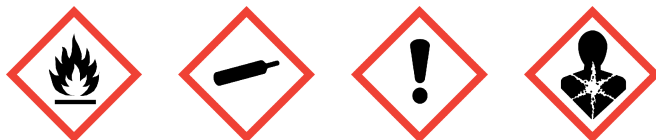
CLASSIFIED AS HAZARDOUS ACCORDING TO AUSTRALIAN WHS REGULATIONS

**GHS classification(s)** Specific Target Organ Systemic Toxicity (Repeated Exposure): Category 2  
Acute Toxicity: Inhalation: Category 4  
Gases Under Pressure: Liquefied gas  
Carcinogenicity: Category 2  
Flammable Gases: Category 1

#### 2.2 Label elements

**Signal word** DANGER

**Pictogram(s)**



**Hazard statement(s)**

H220 Extremely flammable gas.  
H280 Contains gas under pressure; may explode if heated.  
H332 Harmful if inhaled.  
H351 Suspected of causing cancer.  
H373 May cause damage to organs through prolonged or repeated exposure.

**Prevention statement(s)**

P202 Do not handle until all safety precautions have been read and understood.  
P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.  
P260 Do not breathe dust/fume/gas/mist/vapours/spray.  
P271 Use only outdoors or in a well-ventilated area.  
P281 Use personal protective equipment as required.

**PRODUCT NAME METHYL CHLORIDE****Response statement(s)**

P304 + P340 IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.  
P308 + P313 IF exposed or concerned: Get medical advice/ attention.  
P377 Leaking gas fire: Do not extinguish, unless leak can be stopped safely.  
P381 Eliminate all ignition sources if safe to do so.

**Storage statement(s)**

P405 Store locked up.  
P410 + P403 Protect from sunlight. Store in a well-ventilated place.

**Disposal statement(s)**

P501 Dispose of contents/container in accordance with relevant regulations.

**2.3 Other hazards**

No information provided.

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**3. COMPOSITION/ INFORMATION ON INGREDIENTS**

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**3.1 Substances / Mixtures**

Ingredient	CAS Number	EC Number	Content
METHYL CHLORIDE	74-87-3	200-817-4	>99.5%

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**4. FIRST AID MEASURES**

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**4.1 Description of first aid measures**

**Eye** Cold burns: Immediately flush with tepid water or with sterile saline solution. Hold eyelids apart and irrigate for 15 minutes. Seek medical attention.

**Inhalation** If inhaled, remove from contaminated area. To protect rescuer, use an Air-line respirator or Self Contained Breathing Apparatus (SCBA). Be aware of possible explosive atmospheres. Apply artificial respiration if not breathing. Give oxygen if available. For advice, contact a Poison Information Centre on 13 11 26 (Australia Wide) or a doctor.

**Skin** Cold burns: Remove contaminated clothing and gently flush affected areas with warm water (30°C) for 15 minutes. Apply sterile dressing and treat as for a thermal burn. For large burns, immerse in warm water for 15 minutes. DO NOT apply any form of direct heat. Seek immediate medical attention.

**Ingestion** Due to product form and application, ingestion is considered unlikely.

**First aid facilities** No information provided.

**4.2 Most important symptoms and effects, both acute and delayed**

May cause lassitude, nausea, headache, neck and abdominal pains, lack of co-ordination, vertigo, anorexia, muscle tremor. Some symptoms possibly delayed for several hours. Direct contact with the liquefied material or escaping compressed gas may cause cold burns similar to frostbite injury.

**4.3 Immediate medical attention and special treatment needed**

Treat symptomatically.

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**5. FIRE FIGHTING MEASURES**

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**5.1 Extinguishing media**

Stop flow of gas if safe to do so, such as by slowly closing the cylinder valve. If the gas source cannot be isolated, do not extinguish the flame, since re-ignition and explosion could occur. Await arrival of emergency services or manufacturer's advisor. Drench and cool cylinders with water spray from protected area at a safe distance. If it is absolutely necessary to extinguish the flame, use only a dry chemical powder extinguisher. Do not move cylinders for at least 24 hours. Avoid shock and bumps to cylinders.

**5.2 Special hazards arising from the substance or mixture**

Extremely flammable. Eliminate all ignition sources including cigarettes, open flames, spark producing switches/tools, heaters, naked lights, pilot lights, mobile phones etc. when handling.

**5.3 Advice for firefighters**

Temperatures in a fire may cause cylinders to rupture and internal pressure relief devices to be activated. Cool cylinders or containers exposed to fire by applying water from a protected location. Do not approach cylinders or containers suspected of being hot. This material is capable of forming explosive mixtures in air.

**5.4 Hazchem code**

2WE

2 Fine Water Spray.

W Risk of violent reaction or explosion. Wear liquid-tight chemical protective clothing and breathing apparatus. Contain spill and run-off.

E Evacuation of people in and around the immediate vicinity of the incident should be considered.

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**6. ACCIDENTAL RELEASE MEASURES**

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**6.1 Personal precautions, protective equipment and emergency procedures**

If the cylinder is leaking, evacuate area of personnel. Inform manufacturer/supplier of leak. Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe. Ensure adequate air ventilation. Eliminate all sources of ignition. Consider the risk of potentially explosive atmospheres.

**6.2 Environmental precautions**

Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous.

**6.3 Methods of cleaning up**

Carefully move material to a well ventilated remote area, then allow to discharge if safe to do so. Do not attempt to repair leaking valve or cylinder safety devices.

**6.4 Reference to other sections**

See Sections 8 and 13 for exposure controls and disposal.

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**7. HANDLING AND STORAGE**

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**7.1 Precautions for safe handling**

Use of safe work practices are recommended to avoid eye or skin contact and inhalation. Do not drag, drop, slide or roll cylinders. The uncontrolled release of a gas under pressure may cause physical harm. Use a suitable hand truck for cylinder movement.

**7.2 Conditions for safe storage, including any incompatibilities**

Do not store near sources of ignition or incompatible materials. Cylinders should be stored below 45°C in a secure area, upright and restrained to prevent cylinders from falling. Cylinders should also be stored in a dry, well ventilated area constructed of non-combustible material with firm level floor (preferably concrete), away from areas of heavy traffic and emergency exits.

**7.3 Specific end use(s)**

No information provided.

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**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

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**8.1 Control parameters****Exposure standards**

Ingredient	Reference	TWA		STEL	
		ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>
Chloromethane	SWA (AUS)	50	103	100	207

**Biological limits**

No biological limit values have been entered for this product.

**8.2 Exposure controls****Engineering controls**

Provide suitable ventilation to minimise or eliminate exposure. Confined areas (e.g. tanks) should be adequately ventilated or gas tested. Flammable/ explosive vapours may accumulate in poorly ventilated areas. Maintain vapour levels below the recommended exposure standard.

**PPE**

<b>Eye / Face</b>	Wear safety glasses.
<b>Hands</b>	Wear leather or insulated gloves.
<b>Body</b>	Wear safety boots.
<b>Respiratory</b>	Where an inhalation risk exists, wear Self Contained Breathing Apparatus (SCBA) or an Air-line respirator.



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**9. PHYSICAL AND CHEMICAL PROPERTIES**

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**9.1 Information on basic physical and chemical properties**

<b>Appearance</b>	COLOURLESS LIQUID/GAS
<b>Odour</b>	SLIGHT SWEET ODOUR
<b>Flammability</b>	EXTREMELY FLAMMABLE
<b>Flash point</b>	NOT AVAILABLE
<b>Boiling point</b>	-24.2°C
<b>Melting point</b>	NOT AVAILABLE
<b>Evaporation rate</b>	NOT APPLICABLE
<b>pH</b>	NOT APPLICABLE
<b>Vapour density</b>	NOT AVAILABLE
<b>Specific gravity</b>	NOT APPLICABLE
<b>Solubility (water)</b>	2.07 cm <sup>3</sup> /cm <sup>3</sup>
<b>Vapour pressure</b>	580 kPa @ 25°C
<b>Upper explosion limit</b>	17.4 %
<b>Lower explosion limit</b>	8.1 %
<b>Partition coefficient</b>	NOT AVAILABLE
<b>Autoignition temperature</b>	NOT AVAILABLE
<b>Decomposition temperature</b>	NOT AVAILABLE
<b>Viscosity</b>	NOT AVAILABLE
<b>Explosive properties</b>	NOT AVAILABLE
<b>Oxidising properties</b>	NOT AVAILABLE
<b>Odour threshold</b>	NOT AVAILABLE

**9.2 Other information**

<b>Cylinder pressure (when full)</b>	6680 kPa
<b>Density</b>	1.78 (Air = 1)
<b>% Volatiles</b>	100 %
<b>Critical temperature</b>	143.1°C

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**10. STABILITY AND REACTIVITY**

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**10.1 Reactivity**

Carefully review all information provided in sections 10.2 to 10.6.

**10.2 Chemical stability**

Stable under recommended conditions of storage.

**10.3 Possibility of hazardous reactions**

Polymerization will not occur.

**10.4 Conditions to avoid**

Avoid heat, sparks, open flames and other ignition sources.

**10.5 Incompatible materials**

Incompatible with moisture (evolving hydrochloric acid), oxidising agents (e.g. hypochlorites), acids (e.g. nitric acid), heat and ignition sources. Evolves spontaneously flammable aluminum trimethyl with aluminum and its alloys. Do not use natural rubber flexible hoses.

**10.6 Hazardous decomposition products**

May evolve toxic gases if heated to decomposition.

## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

<b>Acute toxicity</b>	Harmful if inhaled. May cause lassitude, nausea, headache, neck and abdominal pains, lack of co-ordination, vertigo, anorexia, muscle tremor. Some symptoms possibly delayed for several hours.
	METHYL CHLORIDE LC50 (Inhalation): 2560 ppm / 4 hours (rat)
<b>Skin</b>	Not classified as a skin irritant. Contact with the liquefied material or escaping compressed gas may cause frostbite injury. Absorbed through skin producing similar effects to inhalation.
<b>Eye</b>	Not classified as an eye irritant. Contact with the liquefied material or escaping compressed gas may cause frostbite injury.
<b>Sensitization</b>	Not classified as causing skin or respiratory sensitisation.
<b>Mutagenicity</b>	May cause heritable genetic damage.
<b>Carcinogenicity</b>	Methyl chloride is not classifiable as to its carcinogenicity (IARC Group 3).
<b>Reproductive</b>	May cause reproductive toxicity in humans.
<b>STOT – single exposure</b>	Over exposure may result in dizziness, drowsiness, weakness, fatigue, breathing difficulties and unconsciousness.
<b>STOT – repeated exposure</b>	Chronic exposure may cause damage to the central nervous system, myocardium, liver, bone marrow and kidneys.
<b>Aspiration</b>	Not classified as causing aspiration.

## 12. ECOLOGICAL INFORMATION

### 12.1 Toxicity

No information provided.

### 12.2 Persistence and degradability

No information provided.

### 12.3 Bioaccumulative potential

No information provided.

### 12.4 Mobility in soil

No information provided.

### 12.5 Other adverse effects

No information provided.

## 13. DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

**Waste disposal** Cylinders should be returned to the manufacturer or supplier for disposal of contents.

**Legislation** Dispose of in accordance with relevant local legislation.

## 14. TRANSPORT INFORMATION

CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE



**PRODUCT NAME METHYL CHLORIDE**

	LAND TRANSPORT (ADG)	SEA TRANSPORT (IMDG / IMO)	AIR TRANSPORT (IATA / ICAO)
14.1 UN Number	1063	1063	1063
14.2 Proper Shipping Name	METHYL CHLORIDE (REFRIGERANT GAS R 40)	METHYL CHLORIDE (REFRIGERANT GAS R 40)	METHYL CHLORIDE (REFRIGERANT GAS R 40)
14.3 Transport hazard class	2.1	2.1	2.1
14.4 Packing Group	None Allocated	None Allocated	None Allocated

**14.5 Environmental hazards** No information provided

**14.6 Special precautions for user**

Hazchem code	2WE
GTEPG	2A4
EMS	F-D, S-U

**Other information** Ensure cylinder is separated from driver and that outlet of relief device is not obstructed.

**15. REGULATORY INFORMATION****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

<b>Poison schedule</b>	A poison schedule number has not been allocated to this product using the criteria in the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).	
<b>Classifications</b>	Safework Australia criteria is based on the Globally Harmonised System (GHS) of Classification and Labelling of Chemicals.  The classifications and phrases listed below are based on the Approved Criteria for Classifying Hazardous Substances [NOHSC: 1008(2004)].	
<b>Hazard codes</b>	Carc. F+ Xn	Carcinogen Extremely flammable Harmful
<b>Risk phrases</b>	R12 R20 R40 R48/20	Extremely Flammable. Harmful by inhalation. Limited evidence of a carcinogenic effect. Harmful: danger of serious damage to health by prolonged exposure through inhalation.
<b>Safety phrases</b>	S9 S16 S33	Keep container in a well ventilated place. Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges.
<b>Inventory listing(s)</b>	<b>AUSTRALIA: AICS (Australian Inventory of Chemical Substances)</b> All components are listed on AICS, or are exempt.	

**16. OTHER INFORMATION**

**Additional information** The storage of significant quantities of gas cylinders must comply with AS4332 The storage and handling of gases in cylinders.

APPLICATION METHOD: Gas withdrawal: Gas regulator of suitable pressure and flow rating fitted to cylinder or manifold with low pressure gas distribution to equipment.

**PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:**

The recommendation for protective equipment contained within this report is provided as a guide only. Factors such as method of application, working environment, quantity used, product concentration and the availability of engineering controls should be considered before final selection of personal protective equipment is made.

**HEALTH EFFECTS FROM EXPOSURE:**

It should be noted that the effects from exposure to this product will depend on several factors including: frequency and duration of use; quantity used; effectiveness of control measures; protective equipment used and method of application. Given that it is impractical to prepare a ChemAlert report which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.

**Abbreviations**

ACGIH	American Conference of Governmental Industrial Hygienists
CAS #	Chemical Abstract Service number - used to uniquely identify chemical compounds
CNS	Central Nervous System
EC No.	EC No - European Community Number
EMS	Emergency Schedules (Emergency Procedures for Ships Carrying Dangerous Goods)
GHS	Globally Harmonized System
GTEPG	Group Text Emergency Procedure Guide
IARC	International Agency for Research on Cancer
LC50	Lethal Concentration, 50% / Median Lethal Concentration
LD50	Lethal Dose, 50% / Median Lethal Dose
mg/m <sup>3</sup>	Milligrams per Cubic Metre
OEL	Occupational Exposure Limit
pH	relates to hydrogen ion concentration using a scale of 0 (high acidic) to 14 (highly alkaline).
ppm	Parts Per Million
STEL	Short-Term Exposure Limit
STOT-RE	Specific target organ toxicity (repeated exposure)
STOT-SE	Specific target organ toxicity (single exposure)
SUSMP	Standard for the Uniform Scheduling of Medicines and Poisons
SWA	Safe Work Australia
TLV	Threshold Limit Value
TWA	Time Weighted Average

**Report status**

This document has been compiled by RMT on behalf of the manufacturer, importer or supplier of the product and serves as their Safety Data Sheet ('SDS').

It is based on information concerning the product which has been provided to RMT by the manufacturer, importer or supplier or obtained from third party sources and is believed to represent the current state of knowledge as to the appropriate safety and handling precautions for the product at the time of issue. Further clarification regarding any aspect of the product should be obtained directly from the manufacturer, importer or supplier.

While RMT has taken all due care to include accurate and up-to-date information in this SDS, it does not provide any warranty as to accuracy or completeness. As far as lawfully possible, RMT accepts no liability for any loss, injury or damage (including consequential loss) which may be suffered or incurred by any person as a consequence of their reliance on the information contained in this SDS.

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