

FOR FURTHER INFORMATION, PLEASE REFER TO THE SDS

Issue: July 18

PRODUCT: Methyl Isobutyl Ketone
Other Names: Isopropyl Acetone, Methyl Pentanone, MIBK
Uses: Industrial solvent

UN No.	1245
Dangerous Goods Class	3
Subsidiary Risk	None
Pack Group	II
Hazchem	•3YE
Poison Schedule	5

Hazardous Nature:	This product is classified as hazardous under GHS for Australia criteria
Hazardous Classification:	Flammable Liquids: 2; Acute Toxicity - Inhalation: 4; Skin Corrosion/Irritation: 3
Hazardous Statement:	Highly Flammable liquid and vapour
Exposure Standards:	TWA: 205 mg/m ³ (50 ppm); STEL: 307 mg/m ³ (75 ppm)

Physical Characteristics (Typical)

Section 9 of SDS

Appearance	Clear, colourless liquid
Boiling Point/ Range (°C):	117
Flash Point (°C):	14
Specific Gravity/ Density (g/ml @ 15°C):	0.8
Chemical Stability:	Stable at room temperature and pressure

Product Ingredients

Section 3 of SDS

Methyl Isobutyl Ketone	108-10-1	99
2-Methyl-2-pentanone	108-11-2	<0.5
Water	7732-18-5	<1.0

For further ingredients information, please refer to the full SDS.

GHS Pictograms

Section 2 of SDS



For further Risk and Safety information, please refer to the full SDS.

DEFINITIONS

Dangerous Goods	Products that are classified as Dangerous for Storage and Transport: these products are allocated a UN No., with accompanying Class, Pack Group, and Sub. Risk, if required. Products that do not have a specific description under the code, but have low flash points, or such, must be classified under their most significant risk, eg. Flammable Goods N.O.S. (Not otherwise specified), UN 1993
Poisonous Substance	Products that are classified under the poisons schedule are a poisonous substance. The proportion of the poison in the product will determine its numerical classification.
Hazardous Substance	Products are considered to be Hazardous if they pose an intrinsic risk to human or environmental health, such as mutagens (able to change DNA), teratogens (able to result in birth defects), carcinogens (able to generate cell abnormalities), etc. Materials are not hazardous substances if they pose risks such as potential for misuse, like flammability, or explosions when heated and ignited.

1. IDENTIFICATION

Product Name:	Methyl Isobutyl Ketone
Other Names:	Isopropyl Acetone, Methyl Pentanone, MIBK
Chemical Family:	Ketone
Recommended Use:	Industrial solvent
Supplier:	Sydney Solvents Pty Ltd
ABN:	51 104 642 695
Street Address:	Unit 3, 10 Production Place, Jamisontown NSW 2750
Telephone:	02 4722 5060
Fax:	
Emergency phone:	CHEMCALL: 1800 127 406
All other inquiries:	02 4722 5060

2. HAZARDS IDENTIFICATION**Hazardous Nature**

This product is classified as hazardous under GHS for Australia criteria

Hazardous Classification

Flammable Liquids: 2; Acute Toxicity - Inhalation: 4; Skin Corrosion/Irritation: 3

Hazardous Statement

Highly Flammable liquid and vapour

GHS Pictograms**Hazard Statements**

H225: Highly flammable liquid and vapour

H332: Harmful if inhaled

H320: Causes eye irritation

AUH066: Repeated exposure may cause skin dryness or cracking

H336: May cause drowsiness or dizziness

Precautionary Statements

P102: Keep out of reach of children.

P403: Store in a well ventilated place.

P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P273: Avoid release to the environment.

Dangerous Goods Classification 3

Poisons Schedule 5

3. COMPOSITION: Information on Ingredients

Chemical Ingredient	CAS No.	Proportion (%v/v)
Methyl Isobutyl Ketone	108-10-1	99
2-Methyl-2-pentanone	108-11-2	<0.5
Water	7732-18-5	<1.0

4. FIRST AID MEASURES

For advice, contact Poisons Information Centre (Phone Australia: 13 1126) or a doctor.

Ingestion

If swallowed, DO NOT induce vomiting. Keep at rest. Seek immediate medical attention.

Eye Contact

Flush eyes with large amounts of water until irritation subsides. Seek immediate medical attention.

Skin Contact

Flush area with large amounts of water and wash area with soap if available. Remove contaminated clothing, including shoes, and launder before reuse. Seek medical attention for skin irritations.

Inhalation

Using proper respiratory protection, immediately remove the affected victim from exposure. Administer artificial respiration if breathing is stopped. Keep at rest. Seek immediate medical attention.

First Aid facilities

Provide eye baths and safety showers.

Medical Attention

Treat according to symptoms. Avoid gastric lavage: risk of aspiration of product to the lungs with the potential to cause chemical pneumonitis.

5. FIRE FIGHTING MEASURES

Shut off product that may 'fuel' a fire if safe to do so. Allow trained personnel to attend a fire in progress, providing firefighters with this Safety Data Sheet. Prevent extinguishing media from escaping to drains and waterways.

Suitable extinguishing media

Alcohol resistant foam, or if unavailable, water spray, water fog or fine mist.

Hazards from combustion products

Carbon dioxide and carbon monoxide

Precautions for fire fighters and special protective equipment

Full protective clothing and self-contained breathing apparatus

Hazchem Code: •3YE

6. ACCIDENTAL RELEASE MEASURES

Emergency Procedures

Prevent fluid from escaping to drains and waterways. Contain leaking packaging in a containment drum. Prevent vapours from building up in confined areas. Ensure that drain valves are closed at all times. Clean up and report spills immediately.

Methods and materials for containment

Major Land Spill

- Eliminate sources of ignition.
- Warn occupants of downwind areas of possible fire and explosion hazard.
- Prevent liquid from entering sewers, watercourses, or low-lying areas.
- Keep the public away from the area.
- Shut off the source of the spill if possible and safe to do so.
- Advise authorities if substance has entered a watercourse or sewer or has contaminated soil or vegetation.
- Take measures to minimise the effect on the ground water.
- Contain the spilled liquid with sand or earth.
- Recover by pumping – use explosion proof pump or hand pump – or with a suitable absorbent material.
- Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations.
- See "First Aid Measures" and "Stability and Reactivity"

Major Water Spill

- Eliminate any sources of ignition.
- Warn occupants and shipping in downwind areas of possible fire and explosion hazard.
- Notify the port or relevant authority and keep the public away from the area.
- Shut off the source of the spill if possible and safe to do so.

- Confine the spill if possible.
- Remove the product from the surface by skimming or with suitable absorbent material.
- Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations.
- See "First Aid Measures" and "Stability and Reactivity".

7. HANDLING AND STORAGE

Precautions for safe handling

This product is flammable. Do not open near open flame, sources of heat or ignition. No smoking. Keep container closed. Handle containers with care. Open slowly to control possible pressure release. Residual vapours will be flammable.

Conditions for safe storage

Store in a cool, dry place away from direct sunlight. Do not pressurise, cut, heat or weld containers - residual vapours are flammable. This product is flammable and will fuel a fire in progress.

Incompatible materials

Natural Rubber, Butyl Rubber, EPDM, Polystyrene

8. EXPOSURE CONTROLS: PERSONAL PROTECTION

National Exposure Standards

The time weighted average concentration (TWA) for this product is: 205 mg/m³ (50 ppm), which means the highest allowable exposure concentration in an eight-hour day for a five-day working week. The short-term exposure limit (STEL) is: 307 mg/m³ (75 ppm), which is the maximum allowable exposure concentration at any time.

Biological limit values

Not available

Engineering Controls: Ventilation

The use of local exhaust ventilation is recommended to control process emissions near the source. Laboratory samples should be handled in a fume hood. Provide mechanical ventilation of confined spaces. Use explosion-proof ventilation equipment.

Personal Protective Equipment

Respiratory Protection: Where concentrations in air may exceed the limits described in the National Exposure Standards, it is recommended to use a half-face filter mask to protect from overexposure by inhalation. A type "A" filter material is considered suitable for this product.

Eye Protection: Always use safety glasses or a face shield when handling this product.

Skin/ Body Protection: Always wear long sleeves and long trousers or coveralls, and enclosed footwear or safety boots when handling this product. It is recommended that chemical resistant gloves (e.g. PVC) be worn when handling this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Property	Unit of measurement	Typical value
Appearance	-	Clear, colourless liquid
Boiling Point/ Range	°C	117
Flash Point	°C	14
Density @ 15°C	g/ml	0.8
Vapour Pressure @ 20°C	kPa	2
Explosive Limits (LEL – UEL)	%	1.2 – 8
Vapour Density @ 20°C	kPa	3.45
Autoignition Temperature	°C	448
Viscosity @ 20°C	cSt	Not applicable
Percent Volatiles	%	100
Solubility with Water	% w/w	Miscible

The values listed are indicative of this product's physical and chemical properties. For a full product specification, please consult the Product Data Sheet.

10. STABILITY AND REACTIVITY

Chemical Stability

Stable at room temperature and pressure

Conditions to avoid

Sources of heat and ignition, open flames.

Hazardous decomposition products

Carbon monoxide, carbon dioxide and other organic complexes on incomplete burning or oxidation.

Hazardous reactions

Oxidizing agents, mineral acids, halogenated organic compounds, chloroform and alkalis.

Hazardous Polymerisation

Will not occur

11. TOXICOLOGICAL INFORMATION

Acute Effects

Ingestion

Small amounts of liquid aspirated into the lungs during ingestion, or from vomiting, may cause chemical pneumonitis, or pulmonary oedema. Ingesting any amount of this product will result in headaches, nausea, dizziness, and tracheal burning.

Eye Contact

This product will be irritating to eye tissue. Vapours at elevated temperatures may be irritating to eyes.

Skin Contact

This product will be irritating to skin with prolonged contact. Vapours at elevated temperatures may be irritating to skin. Avoid direct contact with broken skin.

Inhalation

Vapour is irritating to the upper respiratory tract and mucous membranes. Inhalation is likely to cause headaches, dizziness and nausea. Inhaling the material at high concentrations or elevated temperatures can result in an irregular heart beat and prove suddenly fatal, central nervous system depression leading to loss of coordination, sense of euphoria, impaired judgement and, over prolonged periods, loss of consciousness.

Chronic Effects

Prolonged, repeated skin contact with low viscosity materials may defat the skin resulting in possible irritation and dermatitis.

Other Health Effects Information

Individuals with pre-existing skin or respiratory conditions may be sensitive to this product.

Toxicological Information

Oral LD₅₀: Rat: 2080 mg/kg; Skin (rabbit): > 3 g/kg

Dermal TC_{Lo}: Inhal LC₅₀ (rat): 100 g/m³; TC_{Lo} (man): 2290 mg/m³

12. ECOLOGICAL INFORMATION

Ecotoxicity

Aquatic Toxicity

Fish Toxicity (rainbow trout, goldfish, bluegill): LC₅₀(96hr): Fathead Minnow: 505000 µg/L

Daphnia Magna EC₅₀ (24 hr): 1550000 µg/L

Blue-green algae (Toxicity threshold 7-8 days): LO_{EC}: 1360000 µg/L

Green algae (Toxicity threshold 7-8 days): LO_{EC}: 725000 µg/L

Persistence/ degradability

Volatilises in air

Mobility

This product is soluble in water and therefore highly mobile on dilution risking contamination of soil, waterways, grasslands, and groundwater.

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13. DISPOSAL CONSIDERATIONS**Disposal Methods**

Empty packaging should be taken for recycling, recovery or disposal through a suitably qualified or licensed contractor. Care should be taken to ensure compliance with national and local authorities. Packaging may still contain fumes and vapours that are flammable and harmful. Ensure that empty packaging is allowed to dry.

Special Precautions for Landfill or Incineration

This product is NOT suitable for disposal by either landfill or via municipal sewers, drains, natural streams or rivers. This product is ashless and can be burned directly in appropriate equipment.

14. TRANSPORT INFORMATION

Road and Rail Transport		Marine Transport		Air Transport	
UN No.	1245	UN No.	1245	UN No.	1245
Proper Shipping Name	Methyl Isobutyl Ketone	Proper Shipping Name	Methyl Isobutyl Ketone	Proper Shipping Name	Methyl Isobutyl Ketone
DG Class	3	DG Class	3	DG Class	3
Sub. Risk	None	Sub. Risk	None	Sub. Risk	None
Pack Group	II	Pack Group	II	Pack Group	II
Hazchem	•3YE	Hazchem	•3YE	Hazchem	•3YE

Dangerous Goods Segregation

This product is classed as Dangerous Goods Class 3, packing group II. Please consult the Australian Dangerous Goods Code for Transport by Road and Rail for information.

15. REGULATORY INFORMATION

Country/ Region: Australia

Inventory: AICS

Status: Listed

Poisons Schedule: 5

16. OTHER INFORMATION

Reasons for Issue: Revised Section 9: Physical and Chemical Properties

Abbreviations:

AICS: Australian Inventory of Chemical Substances

CAS Number: Chemical Abstracts Number

IARC: International Agency for Research on Cancer

NOHSC: National Occupational Health and Safety Council

References:

- Supplier Safety Data Sheets
- <http://chem.sis.nlm.nih.gov/chemidplus> (July 18)
- <http://hsis.ascc.gov.au/SearchHS.aspx> (July 18)
- Ecotoxicology data: http://cfpub.epa.gov/ecotox/quick_query.htm (July 18)
- *Sax's Dangerous Properties of Industrial Materials*, Richard J. Lewis Snr., pub. Canada (2000)

The information sourced for the preparation of this document was correct and complete at the time of writing to the best of the writer's knowledge. The document represents the commitment to the company's responsibilities surrounding the supply of this product, undertaken in good faith. This document should be taken as a safety guide for the product and its recommended uses, but is in no way an absolute authority. Please consult the relevant legislation and regulations governing the use and storage of this type of product. For further information, please contact Australasian Solvents and Chemicals Company Pty. Ltd.