

METHYL ETHYL KETONE

MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION

Product Name: Methyl Ethyl Ketone
Other Names: Ethyl Methyl Ketone
Molecular formula:
Recommended Use: Industrial Solvent: Paint and ink manufacture
Supplier: AIM GROUP AUSTRALASIA PTY LTD.
ABN: 15 069 029 232
Street Address: 171 THORNESIDE ROAD, THORNESIDE
Telephone: (07) 3207 1033
Fax: (07) 3207 1044
Emergency phone: CHEMCALL: 1800 127406

2. HAZARDS IDENTIFICATION

Health Hazard Classification

This product is classified as hazardous under NOHSC criteria

Risk Phrases

R 36 Irritating to eyes
R 66 Repeated exposure may cause skin dryness or cracking
R 67 Vapours may cause dizziness and drowsiness

Safety Phrases

S 9 Keep container in a well ventilated place
S 16 Keep away from sources of ignition – No Smoking
S 25 Avoid contact with eyes
S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
S 29 Do not empty into drains
S 33 Take precautionary measures against static discharges
S 43B In case of fire use sand, earth, chemical powder or alcohol type foam

Dangerous Goods Classification 3
Poisons Schedule 5

METHYL ETHYL KETONE

3. COMPOSITION: Information on Ingredients

Chemical Ingredient	CAS No	Proportion (%v/v)
2-Buranone	78-93-3	100

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 Material Safety Data Sheet. Prevent extinguishing media from escaping to drains and waterways.

Suitable Extinguishing Media

Water spray, water fog or fine mist, alcohol foam

Hazards from combustion products

Carbon monoxide and carbon dioxide.

Precautions for Fire Fighters and Special Protective Equipment

Full protective clothing and self-contained breathing apparatus, overalls and safety boots

Hazchem Code:

2[Y]E

6. ACCIDENTAL RELEASE MEASURES

Emergency Procedures

METHYL ETHYL KETONE

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. Material will accumulate static charge. Use grounding leads to avoid discharge (electrical spark).

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 combustible. This product will fuel a fire in progress.

Incompatible materials

Natural Rubber, Butyl Rubber, EPDM, Polystyrene.

METHYL ETHYL KETONE

8. EXPOSURE CONTROLS: PERSONAL PROTECTION

National Exposure Standards

The time weighted average concentration (TWA) for this product is: 590 mg/m³ (200 ppm) when heated, 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: 885 mg/m³ (300 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 be worn when handling this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Property	Unit of Measure	Typical Value
Appearance	-	Clear, colourless liquid
Boiling Point/Range	oC	78-81
Flash Point	oC	-4
Density @ 15 oC	g/ml	0.81 (@ 20 Deg C)
Vapour Pressure @ 20oC	kPa	9.3
Explosive Limits (LEL-UEL)	%	1.8-11.5
Vapour Density @ 20oC	kPa	>1.00
Autoignition Temperature	oC	>450
Viscosity @ 20oC	cSt	Not applicable
Percent Volatiles	%	100%
Solubility with Water	% w/w`	100%

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

10. STABILITY AND REACTIVITY

Chemical Stability

This product is stable.

Date of Issue: 30 March 2012

Date of Review: 30 March 2017

Emergency Number: CHEMCALL: 1800127406

Page 4

METHYL ETHYL KETONE

Conditions to avoid

Sources of heat and ignition, open flames.

Hazardous decomposition products

No decomposition products except on burning. See "Fire Fighting Measures".

Hazardous Reactions

Oxidizing agents, mineral acids, halogenated organic compounds, chloroform and alkalis, stored mixtures with IPA.

11. TOXICOLOGICAL INFORMATION

Acute Effects

Ingestion

This product is harmful by ingestion. Large amounts of this product will result in central nervous system effects such as headaches, dizziness, hallucinations, euphoria, tingling of the extremities, vomiting and possibly loss of consciousness.

Eye Contact

High vapour concentrations produce conjunctiva irritation. This product can cause corneal burns.

Skin Contact

This product is easily absorbed to the skin and produces dryness and cracking after prolonged contact.

Inhalation

High vapor concentrations are irritating to the respiratory system producing central nervous system effects such as dizziness, headaches, nausea, vomiting and loss of appetite.

Chronic Effects

This product is an experimental tetragen and affects the peripheral nervous system (arms and legs). People with pre-existing liver or kidney dysfunction should limit exposure to this product.

Other Health Effects Information

The effects of this product in combination with n-hexane are potentiated (greatly increased). This means that the effects suffered by ingestion or inhalation will be increased or experienced more quickly.

Toxicological Information

MEK: 2737 mg/kg (oral, rat)

MEK: 100 ppm (inhalation, human)

12. ECOLOGICAL INFORMATION

Ecotoxicity

Aquatic Toxicity

Fish Toxicity (rainbow trout, goldfish, bluegill):

LC50(96hr): Based on data for a similar component or preparation, this product is expected to be toxic to aquatic organisms.

Daphnia Magna EC₅₀ (24 hr):

Not available

METHYL ETHYL KETONE

Daphnia Magna EC₅₀ (48 hr):

Long term adverse effects to aquatic organisms are possible if continuous exposure is maintained.

Blue-green algae (Toxicity threshold 7-8 days):

Not available

Green algae (Toxicity threshold 7-8 days):

Not available

Persistence/ degradability

This product can degrade rapidly in air. This substance is expected to be removed in wastewater treatment. Based upon data for a similar components or estimated data, this product is expected to biodegrade rapidly and be 'readily' biodegradable according to OECD guidelines.

Mobility

This product is highly volatile and will rapidly evaporate to the air if released into the water.

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 ash less and can be burned directly in appropriate equipment.

12. TRANSPORT INFORMATION

Road and Rail Transport		Marine Transport		Air Transport	
UN No	1193	UN No	1193	Un No	1193
Proper Shipping Name	Methyl Ethyl Ketone	Proper Shipping Name	Methyl Ethyl Ketone	Proper Shipping Name	Methyl Ethyl Ketone
DG Class	3	DG Class	3	DG Class	3
Sub Risk	None	Sub Risk	None	Sub Risk	None
Pack Group	11	Pack Group	11	Pack Group	11
Hazchem	2[Y]E	Hazchem		Hazchem	

Dangerous Goods Segregation

This product is classed as Dangerous Goods Class 3, Packing Group 111. 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

Date of Issue: 30 March 2012

Date of Review: 30 March 2017

Emergency Number: CHEMCALL: 1800127406

METHYL ETHYL KETONE

16. OTHER INFORMATION

Reasons for Issue: Upgrade to 16-point MSDS; Amalgamated supplier changes in all sections

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 Material Safety Data Sheets
- . 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 AIM Group Australasia Pty Ltd