

# SAFETY DATA SHEET

## METHYL ETHYL KETONE

Version No.: 3.2

Issued Date: 12/09/2016

### 1. IDENTIFICATION

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**GHS Product Identifier**

METHYL ETHYL KETONE

**Product Code**

MEK{size}

**Company Name**

AIM Group Pty Ltd

**Address**

171 Thorneside Rd, Thorneside, QLD 4158

**Telephone/Fax Number**

Telephone: 07 3207 103

**Emergency phone number**

(07) 3207 1033

**E-mail Address**

info@aimgroup.com.au

**Recommended use of the chemical and restrictions on use**

Solvent

### 2. HAZARD IDENTIFICATION

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**GHS classification of the substance/mixture**

Classified as Hazardous according to the Globally Harmonised System of classification and labelling of chemicals (GHS including Work, Health and Safety regulations, Australia)

Classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. (7th edition)

Flammable Liquids: Category 2

Eye Damage/Irritation: Category 2

STOT Single Exposure: Category 3 (respiratory tract irritation)

STOT Single Exposure: Category 3 (narcotic)

**Signal Word (s)**

DANGER

**Hazard Statement (s)**

H225 Highly flammable liquid and vapour.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

H336 May cause drowsiness or dizziness.

AUH066 Repeated exposure may cause skin dryness or cracking.

**Pictogram (s)**

Flame, Exclamation mark

**Precautionary statement Prevention**

P210 Keep away from heat/sparks/open flames/hot surfaces. — No smoking.  
 P233 Keep container tightly closed.  
 P240 Ground/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 contaminated skin thoroughly after handling.  
 P271 Use only outdoors or in a well-ventilated area.  
 P280 Wear protective gloves/protective clothing/eye protection/face protection.

**Precautionary statement — Response****GENERAL**

P312 Call a POISON CENTER or doctor/physician if you feel unwell.  
 P370+P378 In case of fire: Use carbon dioxide, dry chemical, foam, water fog or water mist for extinction.

**INHALATION**

P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

**SKIN**

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

**EYES**

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.

**Precautionary statement — Storage**

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

**Precautionary statement — Disposal**

P501 Dispose of contents/container to an approved waste disposal plant.

**3. COMPOSITION/INFORMATION  IN INGREDIENTS****Ingredients**

Name	CAS	EINECS	Proportion
Methyl ethyl ketone	78-93-3	201-159-0	100 %

**Preparation Description**

Methyl Ethyl Ketone

**4. FIRST-AID MEASURES****Inhalation**

If inhaled, remove affected person from contaminated area. Apply artificial respiration if not breathing. Seek medical attention.

**Ingestion**

Do not induce vomiting. Wash out mouth thoroughly with water. Seek immediate medical attention.

**Skin**

Remove all contaminated clothing immediately. Wash affected area thoroughly with soap and water. Wash contaminated clothing before reuse or discard. Seek medical attention.

**Eye contact**

If in eyes, hold eyelids apart and flush the eyes continuously with running water. Remove contact lenses. Continue flushing for several minutes until all contaminants are washed out completely. Seek medical attention.

**First Aid Facilities**

Eyewash, safety shower and normal washroom facilities.

**Advice to Doctor**

Treat symptomatically.

**Other information**

For advice in an emergency, contact a Poisons Information Centre or a doctor at once. (131 126)

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**5. FIRE-FIGHTING MEASURES****Suitable Extinguishing Media**

Carbon dioxide, dry chemical, foam, water fog or water mist.

**Unsuitable Extinguishing Media**

Do not use water jet.

**Hazards from Combustion Products**

Under fire conditions this product may emit toxic and/or irritating fumes, smoke and gases including carbon monoxide, carbon dioxide and oxides of nitrogen.

**Specific Hazards Arising From The Chemical**

Highly flammable liquid and vapour. Shut off any leak if safe to do so and remove sources of re-ignition. Vapour/air mixtures may ignite explosively. Flashback along the vapour trail may occur. However heating can cause expansion or decomposition leading to violent rupture of containers. Runoff to sewer may create fire or explosion hazard. Vapour is heavier than air and will tend to accumulate in hollows or sumps.

**Hazchem Code**

•2YE

**Decomposition Temperature**

Not available

**Precautions in connection with Fire**

Fire fighters should wear full protective clothing and self-contained breathing apparatus (SCBA) operated in positive pressure mode. In case of fire the product may be violently or explosively reactive. Use water spray to disperse vapours. Eliminate all ignition sources if safe to do so. This product should be prevented from entering drains and watercourses.

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**6. ACCIDENTAL RELEASE MEASURES****Emergency Procedures**

Extinguish or remove all sources of ignition and stop leak if safe to do so. Wear appropriate personal protective equipment and clothing to prevent exposure. Extinguish or remove all sources of ignition and stop leak if safe to do so. Increase ventilation. Evacuate all unprotected personnel. If possible contain the spill. Place inert absorbent, non-combustible material onto spillage. Use clean non-sparking tools to collect the material and place into suitable labelled containers for subsequent recycling or disposal. Dispose of waste according to the applicable local and national regulations. If contamination of sewers or waterways occurs inform the local water and waste management authorities in accordance with local regulations.

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**7. HANDLING AND STORAGE****Precautions for Safe Handling**

Wear appropriate personal protective equipment and clothing to prevent exposure. Handle and use the material in a well-ventilated area, away from sparks, flames and other ignition sources. Have emergency equipment for fires, spills, leaks, etc.) readily available. Work from suitable, labelled, fire-resistant containers. Open containers carefully as they may be under pressure. Keep containers tightly closed. Flameproof equipment is necessary in areas where the product is being used. Take precautionary measures against static discharges. Earth or bond all equipment. Do not empty into drains. Ensure a high level of personal hygiene is maintained when using this product, that is, always wash hands before eating, drinking, smoking or using the toilet facilities.

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

Store in a cool, dry, well-ventilated area away from sources of ignition, oxidising agents, strong acids, foodstuffs, and clothing.

Keep containers closed when not in use, securely sealed and protected against physical damage. Inspect regularly for deficiencies such as damage or leaks. Have appropriate fire extinguishers available in and near the storage area. Take precautions against static electricity discharges. Use proper grounding procedures. Ensure that storage conditions comply with applicable local and national regulations.

For information on the design of the storeroom, reference should be made to Australian Standard A51940 - The storage and handling of flammable and combustible liquids.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Occupational exposure limit values

Substance	Regulations	Exposure Duration	Exposure Limit	Units	Notes
Methyl ethyl ketone	Safe Work Australia	TWA	150	ppm	
Methyl ethyl ketone	Safe Work Australia	TWA	445	mg/m3	
Methyl ethyl ketone	Safe Work Australia	STEL	300	ppm	
Methyl ethyl ketone	Safe Work Australia	STEL	890	mg/m3	

### Biological Limit Values

Name: Methyl Ethyl Ketone [78-93-3]

Determinant: Methyl Ethyl Ketone in urine

BEVP: 2mg/L

Sampling time: end of shift.

Source: American Conference of industrial Hygienists (ACGIH)

### Appropriate Engineering Controls

This substance is hazardous and should be used with a local exhaust ventilation system, drawing vapours away from workers' breathing zone. A flame-proof exhaust ventilation system is required. If the engineering controls are not sufficient to maintain concentrations of vapours/mists below the exposure standards, suitable respiratory protection must be worn. Refer to relevant regulations for further information concerning ventilation requirements.

Refer to AS 1940 - The storage and handling of flammable and combustible liquids and AS/NZS 60079.10.1:2009 Explosive atmospheres - Classification of areas - Explosive gas atmospheres, for further information concerning ventilation requirements.

### Respiratory Protection

If engineering controls are not effective in controlling airborne exposure then an approved respirator with a replaceable vapor/mist filter should be used. Final choice **will** vary according to individual circumstances. Refer to relevant regulations for further information concerning respiratory protective requirements.

Reference should be made to Australian Standards AS/NZS 1715, Selection, Use and Maintenance of Respiratory Protective Devices; and AS/NZS 1716, Respiratory Protective Devices, in order to make any necessary changes for individual circumstances.

### Eye Protection

Safety glasses with side shields, chemical goggles or full-face shield as appropriate should be used. Final choice of appropriate eye/face protection will vary according to individual circumstances. i.e. methods of handling or according to risk assessments undertaken.

Eye protection should conform with Australian/New Zealand Standard AS/NZS 1337 - Eye Protectors for Industrial Applications.

### Hand Protection

Wear gloves of impervious material such as laminated film and PVC. Final choice of appropriate gloves will vary according to individual circumstances i.e. methods of handling or according to risk assessments undertaken.

Reference should be made to AS/NZS 2161.1: Occupational protective gloves - Selection, use and maintenance.

### Body Protection

Suitable protective workwear, e.g. cotton overalls buttoned at neck and wrist is recommended.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Form

Liquid

**Appearance**

Water white liquid

**Colour**

Water white

**Odour**

Strong ketonic odour

**Decomposition Temperature**

Not available

**Melting Point**

-86°C

**Boiling Point**

80°C

**Solubility in Water**

29g/100 nn L

**Specific Gravity**

0.80 (20°C)

**PH**

Not available.

**Vapour Pressure**

89hPa (20°C)

**Vapour Density (Air=1)**

2.40 (20°C)

**Evaporation Rate**

3.70

**Odour Threshold**

Not available.

**Viscosity**

Refer to Section 9: kinematic viscosity, dynamic viscosity

**Volatile Component**

100%

**Partition Coefficient: n-octanol/water**

Not available.

**Flash Point**

- 4°C

**Flammability**

Highly flammable liquid

**Flammable Limits - Lower**

1.80% v/v

**Flammable Limits - Upper**

11.50% v/v

**Explosion Properties**

Not available

**Oxidising Properties**

Not available

**Kinematic Viscosity**

Not available.

**Dynamic Viscosity**

Not available

## 10. STABILITY AND REACTIVITY

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### Reactivity

Refer to Section 10: Possibility of hazardous reactions

### Chemical Stability

Stable under normal conditions of storage and handling.

### Conditions to Avoid

Avoid sparks, flames and other ignition sources.

### Incompatible materials

Strong oxidising agents, acids and bases.

### Hazardous Decomposition Products

Thermal decomposition may result in the release of toxic and/or irritating fumes including: carbon monoxide and carbon dioxide.

### Possibility of hazardous reactions

Reacts with incompatible materials.

### Hazardous Polymerization

Will not occur.

## 11. TOXICOLOGICAL INFORMATION

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### Toxicology Information

Toxicity data for material given below.

#### Acute Toxicity - Oral

LD50 (rat): 2900 mg/kg

#### Acute Toxicity - Inhalation

LC50 (rat): 23.5-34.5 mg/L/4h

#### Ingestion

Ingestion of this product may irritate the gastric tract causing nausea and vomiting. Ingestion may cause CNS depression with symptoms including drowsiness, dizziness, fatigue, confusion and possible unconsciousness.

#### Inhalation

May cause respiratory irritation. Inhalation of product vapours can cause irritation of the nose, throat and respiratory system. May cause irritation to the mucous membrane and upper airways, especially where vapours or mists are generated. Symptoms include sneezing, coughing, wheezing, shortness of breath, headache, dizziness, drowsiness, nausea and vomiting. If vapours are formed inhalation may cause CNS depression with symptoms similar to those seen if product is swallowed.

#### Skin

May be irritating to skin. The symptoms may include redness, itching and swelling. Repeated exposure may cause skin dryness and cracking and may lead to dermatitis.

#### Eye

Causes serious eye irritation. On eye contact this product will cause tearing, stinging, blurred vision, and redness.

#### Respiratory sensitisation

Not expected to be a respiratory sensitiser.

#### Skin Sensitisation

Not expected to be a skin sensitiser.

#### Germ cell mutagenicity

Not considered to be a mutagenic hazard.

#### Carcinogenicity

Not considered to be a carcinogenic hazard.

#### Reproductive Toxicity

Not considered to be toxic to reproduction.

**STOT-single exposure**

May cause respiratory irritation. May cause drowsiness or dizziness.

**STOT-repeated exposure**

Not expected to cause toxicity to a specific target organ.

**Aspiration Hazard**

Not expected to be an aspiration hazard.

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**12. ECOLOGICAL INFORMATION****Ecotoxicity**

No ecological data available for this material.

**Persistence and degradability**

Not available

**Mobility**

Not available

**Bioaccumulative Potential**

Not available

**Other Adverse Effects**

Not available

**Environmental Protection**

Do not discharge this material into waterways, drains and sewers.

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**13. DISPOSAL CONSIDERATIONS****Disposal considerations**

Dispose of waste according to applicable local and national regulations. Labels should not be removed from containers until they have been cleaned. Do not cut, puncture or weld on or near containers. Empty containers may contain flammable residues. Contaminated containers must not be treated as household waste. Containers should be cleaned by appropriate methods and then re-used or disposed of by landfill or incineration as appropriate. Do not incinerate closed containers. Advise flammable nature. Controlled incineration is recommended.

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**14. TRANSPORT INFORMATION****Transport Information**

This material is a Class 3 - Flammable Liquid according to The Australian Code for the Transport of Dangerous Goods by Road and Rail. (7th edition)

Class 3 - Flammable Liquids are incompatible in a placard load with any of the following:

Class 1: Explosives

Division 2.1: Flammable gases

(Division 2.1 and Class 3 are incompatible in transport if both are in tanks or other receptacles with a capacity individually exceeding 300 L)

Division 2.3: Toxic gases

Division 4.2: Spontaneously combustible substances

Division 5.1: Oxidising substances and

Division 5.2: Organic peroxides

Class 6: Toxic or Infectious Substances

(where the flammable liquid is nitromethane)

Class 7: Radioactive materials unless specifically exempted

**U.N. Number**

1193

**UN proper shipping name**

ETHYL METHYL KETONE (METHYL ETHYL KETONE)

**Transport hazard class(es)**

3

**Packing Group**

fl

**Hazchem Code**

• 2YE

**Special Precautions for User**

Not available

**IERG Number**

14

**UN Number (Air Transport, ICAO)**

1193

**IATA/ICAO Proper Shipping Name**

METHYL ETHYL KETONE

**IATA/ICAO Hazard Class**

3

**IATA/ICAO Packing Group****IATA/ICAO Symbol**

Flammable Liquid

**IMDG UN No**

1193

**IMDG Proper Shipping Name**

METHYL ETHYL KETONE

**IMDG Hazard Class**

3

**IMDG Pack. Group**

El

**IMDG Marine pollutant**

No

**IMDG EMS**

F-E,S-D

**Transport in Bulk**

Not available

**15. REGULATORY INFORMATION**

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**Regulatory information**

Classified as Hazardous according to the Globally Harmonised System of classification and labelling of chemicals (GHS) including Work, Health and Safety regulations, Australia

Classified as a Scheduled Poison according to the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP)

**Poisons Schedule**

S5

**16. OTHER INFORMATION**

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**Date of preparation or last revision of SDS**

SDS Created: September 2016

**References**

Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice

Standard for the Uniform Scheduling of Medicines and Poisons.

Australian Code for the Transport of Dangerous Goods by Road & Rail.

Model Work Health and Safety Regulations, Schedule 10: Prohibited carcinogens, restricted carcinogens and restricted hazardous



chemicals.

Workplace exposure standards for airborne contaminants.

Adopted biological exposure determinants, American Conference of Industrial Hygienists (ACGIH).

Globally Harmonised System of classification and labelling of chemicals.

**Contact Person/Point**

IMPORTANT ADVICE: An SDS summarizes our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. The information contained in this SDS is believed to be correct but is not guaranteed. Prior to using the product(s) referred to in this SDS, each user should read this SDS and consider the information in the context of how the product will be handled and used in the workplace, including its use in conjunction with other products. If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact the supplier listed in section 1 of the SDS. Our responsibility for products sold is subject to our standard terms and conditions, a copy of which is sent to our customers and is also available on request. AIM does not accept any other liability either directly or indirectly for any losses suffered in connection with the use and application of the product whether or not in accordance with any advice, specification, recommendation or information given by it.

**END OF SDS**