

# SAFETY DATA SHEET

**PRODUCT NAME:** METHYL ETHYL KETONE

Issue Date: August 22

## IDENTIFICATION

**Product Name:** Methyl Ethyl Ketone  
**Other Names:** Ethyl methyl ketone; 2-Butanone; Butan-2-one; Butanone AR; MEK.  
**Product Code:** CMEK20, ZMEK  
**Uses:** Industrial solvent.  
**Supplier:** HamChem Hamilton Chemicals Ltd, 75 Ruffell Rd, Hamilton  
Phone: 079744971 Web: [www.hamchem.co.nz](http://www.hamchem.co.nz) Email: [sales@hamchem.nz](mailto:sales@hamchem.nz)

- In emergency dial 111, and then ask for Fire, Ambulance or Police as necessary.
- In case of poisoning phone National Poisons Centre – 0800 764 766

## HAZARD IDENTIFICATION



### GHS Classifications

Flammable Liquid – Category 2

Eye Irritation – Category 2

Specific Target Organ Toxicity (Repeated Exposure) - Category 2

**Signal word:** DANGER

### Hazard Statements

H225 – Highly flammable liquid and vapour

H319 – Causes serious eye irritation

H373 – May cause damage to organs through prolonged or repeated exposure

### Prevention

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

P233 – Keep container tightly closed

P240 – Ground and bond container and receiving equipment

P241 – Use explosion-proof electrical/lighting/ventilating equipment

P242 – Use non-sparking tools

P243 – Take action to prevent static discharges

P280 – Wear protective gloves/clothing and eye/face protection

P264 – Wash hands thoroughly after handling

P260 – Do not breathe fume/gas/mist/vapours/spray

### Response Statements

P301+P361+P353 – IF ON SKIN (or hair): Take immediately all contaminated clothing. Wash skin with soap and water.

P370+P378 – In case of fire: use dry chemical powder, or water fog/mist to extinguish.

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P305+P351+P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing.

P337+P313 – If eye irritation persists: Get medical advice.

P314 – Get medical advice/attention if you feel unwell

**Storage Statement**

P403+P235 – Store in a well-ventilated place. Keep cool

**Disposal Statement**

P501 – Dispose of contents/container to approved waste facility in accordance with local regulations

**COMPOSITION & INFORMATION ON INGREDIENTS**

Chemical Entity	CAS No.	Proportion (% w/w)
Methyl Ethyl Ketone	78-93-3	>99.5

**FIRST AID MEASURES**

Consult the National Poisons Centre, 0800 764 766 [0800 POISON] or a Doctor in every case of suspected poisoning. If medical advice is needed, have product label or container at hand.

**INGESTION:** Do NOT induce vomiting. Call a Poison Centre or doctor immediately for advice. If vomiting occurs spontaneously, keep head below hips to prevent aspiration.

**INHALATION:** Move person to fresh air and keep warm and at rest until recovered. Ensure those providing assistance are not exposed to vapour hazard. If respiratory irritation, dizziness, nausea or unconsciousness occurs, get immediate medical assistance. If breathing is difficult or has stopped, used mechanical device or mouth to mouth resuscitation.

**SKIN:** Remove immediately all contaminated clothing and footwear. Wash affected area with plenty of soap and water. If skin irritation occurs, get medical advice. Wash contaminated clothing/footwear before re-use.

**EYES:** Hold eyes open and rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do after the first 5 minutes. Continue rinsing for at least 15 minutes. Get medical attention if irritation persists.

**NOTES TO PHYSICIAN:** Treat symptomatically. Risk of aspiration into lungs resulting in chemical pneumonitis which may be fatal. This product or a component, may be associated with cardiac sensitization following very high exposures (well above occupational exposure limits) or with concurrent exposure to high stress levels or heart stimulating substances like epinephrine. Administration of such substances should be avoided.

**FIRE FIGHTING MEASURES**

**FLASH POINT:** -9 0C

**FLAMMABLE LIMITS:** LFL: 1.85% v/v UFL: 11.5 % v/v

**EXTINGUISHING MEDIA:** Use dry chemical powder, carbon dioxide, sand or earth for small fires only. Use water fog or mist or alcohol-resistant foam for large fires. Do NOT use water in a jet. Use water spray to disperse vapours.

**FIRE & EXPLOSION HAZARDS:** Above flash point, vapour-air mixtures are explosive within the flammable limits given above. Vapour is heavier than air and may travel across ground and reach remote ignition sources causing a flashback fire danger. Avoid breathing smoke. Prevent extinguishing water from getting into the aquatic environment.

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HamChem Ltd, 75 Ruffell Road, Hamilton, New Zealand. Phone: 07-974-4971 Email: [info@hamchem.nz](mailto:info@hamchem.nz) Web: [www.hamchem.nz](http://www.hamchem.nz)

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**SPECIFIC HAZARDS:** Cool fire exposed containers with large quantities of water.

**FIRE-FIGHTING EQUIPMENT:** Wear personal protection equipment and in enclosed spaces, self-contained breathing apparatus.

### ACCIDENTAL RELEASE MEASURES

**SPILLS:** Highly flammable liquid. Vapour forms explosive mixture with air. Isolate hazard area and keep unnecessary and unprotected people away from area. Stay upwind and keep out of low-lying areas. Wear appropriate personal protective equipment. Avoid contact with skin and eyes. Shut off leak if safe to do so. Remove or isolate ignition sources. Contain spill. Avoid run off into drains or sewers. Do not contaminate watercourses or the ground. Take precautions against static discharge. Bound or ground (earth) all equipment. Ventilate contaminated area. For small spills, absorb with an appropriate material, e.g., vermiculite, and dispose of waste safely in a labelled sealed container for recovery or disposal. For large spills (more than a drum), recover liquid and transfer by mechanical means to labelled salvage tank that can be sealed for recovery or disposal of product. Allow residues to evaporate. Water can be used to disperse vapours and to clean spill area although prevent water from entering sewers or drains. Remove any contaminated soil and dispose of safely by waste management company. Large spills to waterways will require specific actions such as containment booms and removal of product from surface of water. Seek advice of specialist. If contamination of drains, sewers or waterways occurs immediately notify Emergency Services (111).

**DISPOSAL:** Dispose of contaminated waste or product to an approved enclosed controlled burner or incinerator, or to hazardous landfill in accordance with local regulations.

### HANDLING & STORAGE

**HANDLING:** Read label before use. Use only in well-ventilated areas. Avoid breathing vapours or direct contact with product. Remove ignition sources. Avoid sparks. Electrostatic charge may be generated during pumping with risk of fire. Restrict line viscosity to avoid generation of electrostatic discharge. Take precautions to use bonded or grounded (earthed) equipment. No Smoking. Do not use compressed air for filling, discharging or handling. Keep container closed when not in use. Wear personal protective equipment to prevent breathing of and contact with product. Wear suitable chemical resistant gloves and protect eyes from splashes. Wash hands and exposed skin after handling.

**STORAGE:** Ensure all storage areas have adequate fire-fighting equipment. Store in closed original container in a secure cool dry well-ventilated place, away from sunlight, ignition sources, heat, oxidizing agents, and out of reach of children, and away from food, drink and animal foodstuffs. Take precautions to avoid accumulation of vapours in pits and confined spaces.

### EXPOSURE CONTROLS & PERSONAL PROTECTION

**EXPOSURE GUIDELINES:** NZ Workplace Exposure Standard (WES) have been set by Worksafe NZ for this substance:

	WES-TWA	WES-STEL
Methyl Ethyl Ketone	150 ppm (445mg/m <sup>3</sup> )	300 ppm (890mg/m <sup>3</sup> )

**ENGINEERING CONTROLS:** Use only in a well-ventilated area. A half-face filter mask suitable for organic gases and vapours (Type A filter material) may be suitable for low concentration level exposures. Otherwise, use full-piece organic vapour respiratory protective equipment. Where air-filtering respirators are unsuitable (e.g., air-borne concentrations are high, risk or oxygen deficiency, confined space) use positive pressure breathing apparatus.

**PERSONAL PROTECTIVE EQUIPMENT (PPE):** Wear impervious antistatic protective clothing including safety shoes or boots. Wear appropriate chemical resistant gloves, e.g., nitrile, PVA. Avoid contact with eyes. Wear chemical goggles or safety glasses with side shields, if splash or aerosol/mist exposure risk.

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Refer to the relevant AS/NZ standards for appropriate personal protective equipment. Routinely wash work clothing and protective equipment to remove contaminants. Discard any protective equipment, clothing or footwear that cannot be cleaned.

**PHYSICAL & CHEMICAL PROPERTIES**

**Form:** Liquid  
**Colour:** Clear, colourless  
**Odour:** Characteristic  
**Boiling point (°C):** 79.6  
**Flash point (°C):** -9  
**Vapour pressure (kPa):** 9.5 @ 20°C  
**Density at 20°C, g/cc:** 0.805  
**Solubility in water:** 27100 mg/l  
**pH:** Not applicable  
**Vapour density (air =1):** 2.4  
**Evaporation rate (nBuAc =1):** 6

**STABILITY & REACTIVITY**

**STABILITY (CONDITIONS TO AVOID):** Stable under normal storage and use conditions. Avoid heat, sparks, open flames, ignition sources and contact with incompatible materials.

**INCOMPATIBILITY (MATERIALS TO AVOID):** Strong oxidising agents, aldehydes, nitric acid, perchloric acid. Violently reacts with potassium-tert-butoxide.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Dependent on conditions under which decomposition occurs. No decomposition at ambient temperatures.

**HAZARDOUS POLYMERIZATION:** Not known to occur.

**TOXICOLOGICAL INFORMATION**

**POTENTIAL HEALTH EFFECTS:** This section includes possible adverse effects, which might occur if this product is not handled in the recommended manner.

**INHALATION:** May cause irritation of upper respiratory tract. Symptoms of overexposure include headache, dizziness, nausea, shortness of breath and vomiting. May cause central nervous system depression and unconsciousness at high concentrations.

**SKIN CONTACT:** Moderately irritating to skin with symptoms of redness, itching and pain. Prolonged contact may defat the skin, and result in dermatitis.

**EYE CONTACT:** Vapours can cause eye irritation. Direct contact, e.g., splashes, cause severe pain and irritation.

**SYSTEMIC (OTHER TARGET ORGAN) EFFECTS:** Animal studies indicate chronic exposures may affect the liver and kidneys. Persons with pre-existing skin disorders, eye problems, impaired respiratory function or central nervous system conditions, may be more susceptible to the effects of this substance.

**CANCER INFORMATION:** Not classified as carcinogen.

**TERATOLOGY (BIRTH DEFECTS) AND REPRODUCTIVE DEFECTS:** Not classified.

**MUTAGENICITY (EFFECTS ON GENETIC MATERIAL):** Not a mutagen.

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**Toxicological data:**

Methyl isobutyl ketone oral, guinea pig LD50 1600 mg/kg b.w.

**ECOLOGICAL INFORMATION**

**ENVIRONMENTAL FATE:** This product has been classified as being toxic to terrestrial vertebrates. Methyl isobutyl ketone has low toxicity to fish and aquatic organisms.

**MOVEMENT AND PARTITIONING:** Product has some solubility in water. If released into soil there is potential to leach into groundwater. There is a minimal tendency to bind to soil and sediment.

**DEGRADATION AND PERSISTENCE:** Not expected to bio accumulate significantly and is expected to be readily biodegradable. In air is expected to rapidly degrade in air.

**ECOTOXICOLOGY:** No EEL has been set for this substance.

**Ecotoxicity data:**

Methyl isobutyl ketone Red winged blackbird oral, LD50 100 mg/kg b.w.

**DISPOSAL CONSIDERATIONS**

Recover and recycle product whenever possible. Dispose of waste in accordance with Regional Authority or local council bylaws. Ensure empty containers are vented and dry. Residues may cause an explosion hazard. Do not puncture, cut or weld uncleaned drums. Send clean dry drums to recycler or metal scrap reclaimer. Do not use empty drums for storing other products.

**TRANSPORT INFORMATION**

This product is classified as a Dangerous Goods Class 3, Packing Group II.  
Please consult the Land Transport Rule: Dangerous Goods 2005, and NZS 5433:2012 Transport of Dangerous Goods on Land for information.

<b>UN No:</b>	1193
<b>Class-primary</b>	3 Flammable Liquid
<b>Packing Group:</b>	II
<b>Proper Shipping Name:</b>	ETHYL METHYL KETONE (METHYL ETHYL KETONE)
<b>Hazchem Code:</b>	2[Y]E
<b>Marine Pollutant:</b>	No

**REGULATORY INFORMATION**

**HSNO Classifications:** 3.1B, 6.4A, 6.9B  
**EPA New Zealand Approval Code:** HSR001190

**OTHER INFORMATION**

**Key to abbreviations:**

CAS No.	Chemical Abstracts Service Number
EPA	Environmental Risk Management Authority
HSNO	Hazardous Substances & New Organisms
STEL	Short Term Exposure Limit
TWA	Time Weighted Average
WES	Workplace Exposure Standard
Supplier Safety Data Sheet	

**End of SDS.**

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