Safety Data Sheet

Date of Issue: 03.03.2021 Date of Expiry: 03.03.2026

1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Distributor Name : **ECP Limited**
Address : PO Box 34125, Birkenhead, Auckland 0746
Telephone : +64 9 480 4386
Facsimile : +64 9 480 4385
Emergency phone number : 0800 243 622 (24 hours)

Product	**Methyl Ethyl Ketone**			**Code**	**32558**
CAS#	**EPA HSNO#**	**UN #**	**DG Class/es**	**Packing group #**	
78-93-3	HSR001190	1193	3	II	

Recommended use : Laboratory Investigations

2: Hazards identification

2.1 GHS Classification

This substance is hazardous according to the EPA Hazardous Substances (Classification) Notice 2017
NZ:- 31.B; 6.1E; 6.3B ;6.4A; 6.9B

2.2 GHS Label elements, including precautionary statements

Hazard Pictogram

Signal Word : **Danger**

HSNO Classes	Hazard Code	Hazard Statement	GHS Category
3.1B	H225	Highly flammable liquid and vapour.	Category 2
6.1E (oral)	H303	May be harmful if swallowed.	Category 5
6.3B	H316	Causes mild skin irritation.	Category 3
6.4A	H319	Causes serious eye irritation.	Category 2A
6.9B	H373	May cause damage to organs through prolonged or repeated exposure.	Category 2

Prevention	**Prevention Statement**
P102	Keep out of reach of children.
P103	Read label before use.
P210	Keep away from heat, sparks, open flames and hot surfaces. No smoking.
P233	Keep container tightly closed.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical, ventilating, and lighting.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P260	Do not breathe fumes, vapours or spray.

P264	Wash hands thoroughly after handling.
P280	Wear protective clothing.

Response code	**Response Statement**
P101	If medical advice is needed, have product container or label at hand.
P312	Call a POISON CENTER or doctor/physician if you feel unwell.
P303 + P361+P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305 + P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P332 + P313	If skin irritation occurs: Get medical advice/ attention.
P337 + P313	If eye irritation persists: Get medical advice/attention.
P370 + P378	In case of fire: Use dry chemical powder, carbon dioxide, or alcohol foam for extinction.

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

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

2.3 Other hazards
Repeated exposure may cause skin dryness or cracking.

3: Composition/information on ingredients

Ingredients	Wt%	CAS NUMBER
Methyl Ethyl Ketone	100	78-93-3

4: First aid measures

Routes of Exposure:
If in 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.

If on Skin
Wash exposed area with mild soap and water. Get medical attention if irritation develops or persists.

If Swallowed
Do not induce vomiting. Wash out mouth thoroughly with water. Never give anything to the mouth of an unconscious person. If vomiting occurs, place victim face downwards, with the head turned to the side and lower than the hips to prevent vomit entering the lungs. Seek medical attention if needed.

If Inhaled
Remove person to fresh air. Remove contaminated clothing and loosen remaining clothing. Allow person to assume most comfortable position and keep warm. Keep at rest until fully recovered. Apply artificial respiration if not breathing. Get medical advice if breathing becomes difficult.

Most important symptoms and effects, both acute and delayed
Symptoms:

Ingestion	May be harmful if swallowed.
Inhalation	Not applicable.
Skin	Causes mild skin irritation.
Eyes	Causes serious eye irritation.
Chronic	May cause damage to organs through prolonged or repeated exposure.
Notes to Physician	Exposure to high concentrations of this material (e.g., in enclosed spaces or with deliberate abuse) may be associated with cardiac arrhythmias. Epinephrine and other sympathomimetic drugs may initiate cardiac arrhythmias in persons exposed

to this material. If sympathomimetic drugs are administered, observe for the development of cardiac arrhythmias.

5: Firefighting measures

Hazard Type	Flammable Liquid
Flash Point	-40C
Auto Ignition Point	4040C
Flammable Limits in Air % by Volume	1.8 to 11.5
Hazards from combustion products	Vapour accumulations may flash and/or explode if ignited. Keep ignition sources, open flames, etc. away from those fumes.
Suitable Extinguishing media	Dry chemical, alcohol foam, or carbon dioxide.
Precautions for firefighters and special protective clothing	Proper respiratory equipment to protect against the hazardous effects of combustion products is recommended. Water in a straight hose stream may cause fire to spread and should be used as a cooling medium only. Alert Fire Bridge (111); advice location and nature of hazard. Wear breathing apparatus and protective gloves. Shut off product that may „fuel" a fire if safe to do so. If safe, switch off electrical equipment until vapour hazard removed. Allow trained personnel to attend a fire in progress, providing fire fighters with this Safety Data Sheet. Prevent product and extinguishing media from escaping to drains and waterways.
HAZCHEM CODE	**2YE**

6: Accidental release measures

Minor spills:
Remove or eliminate all ignition sources. Clean up spills immediately. Avoid breathing vapours and contact with skin and eyes. Wear personal protective equipment. Contain and absorb small quantifies with vermiculite or other absorbent material. Collect residues and waste material in a labelled container suitable for flammables. Seal container and dispose of safely.

Major spills:
Clear area of personnel and move upwind. Alert Fire Bridge (111); advice location and nature of hazard. Wear breathing apparatus plus protective gloves. Stop leak if safe to do so. Contain spill with sand, earth, or vermiculite. Eliminate sources of ignition, naked lights. No smoking. Increase ventilation. Collect recoverable product into labelled contains for recycling. Absorb remaining product with sand, earth, or vermiculite. Collect solid residues and seal in labelled drums for disposal. Wash area and prevent run off into drains. If contamination of drains or waterways occurs, advise Emergency Services and Local or Regional authority

7: Handling and storage

Handling:
Open container slowly to relieve any pressure. Bond and ground all equipment when transferring from one vessel or container to another. This material can accumulate static charge by flow or agitation. Vapours can be ignited by static discharge. Use explosion proof equipment as directed by local fire codes. Keep out of reach of children. Read label before use. Keep away from heat, sparks, open flames and hot surfaces. No smoking.
Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical, ventilating, and lighting. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe fumes, vapours or spray.
Wash hands thoroughly after handling. Wear protective clothing.

Storage:
Store unopened containers under cool, dry and ventilated conditions. Keep away from heat, sparks and flame.
Store away from incompatible materials listed in Section 10.

8: Exposure controls/personal protection

WORKPLACE EXPOSURE STANDARDS (provided for guidance only)

	TWA		STEL	
Substance	**ppm**	**mg/m3**	**ppm**	**mg/m3**
Methyl ethyl ketone (bio) [78-93-3]	150	445	300	890

Workplace Exposure Standard – Time Weighted Average (WES-TWA). The time-weighted average exposure standard designed to protect the worker from the effects of long-term exposure. Workplace Exposure Standard – Short-Term Exposure Limit (WESSTEL). The 15-minute average exposure standard. Applies to any 15- Minute period in the working day and is designed to protect the worker against adverse effects of irritation, chronic or irreversible tissue change, or narcosis that may increase the likelihood of accidents. The WES-STEL is not an alternative to the WES-TWA; both the short-term and time-weighted average exposures apply. Workplace Exposure Standards and Biological Exposure Indices NOV 2017 9TH EDITION.

Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Engineering Controls:	General (mechanical) room ventilation is considered satisfactory in enclosed spaces. Where explosive mixtures may be present, electrical systems safe for such locations must be used.
Eye / Face Protection:	Wear safety glasses with side shields or goggles when handling this material.
Body Protection:	PVC-coated gloves. Avoid skin contact. If skin contact or contamination of clothing is likely, protective clothing should be worn.
Respiratory Protection:	Use NIOSH approved respiratory protection equipment appropriate to the material.

9: Physical and chemical properties

Appearance	Liquid
Colour	Water White
Odour	Characteristic Solvent Odour
Odour Threshold	Not available
pH	Not applicable
Boiling Point	79.60C
Melting Point	Not available
Freezing Point	Not available
Flash Point	-40C
Flammability	Flammable
Upper and Lower Explosive Limits	1.8% to 11.5%
Vapour Pressure	9.5kPa @ 200C)
Vapour Density	2.4 kPa @200C
Specific Gravity	0.804 – 0.806@ 200C
Solubility in Water	Miscible
Partition Coefficient:	Not available
Auto-ignition Temperature	4040C
Decomposition Temperature	Not available
Kinematic Viscosity	Not available
Particle Characteristics	Not applicable

10: Stability and reactivity

Stability of the Substance:	Stable under normal storage and use conditions.
Conditions to avoid:	Exposure to excessive heat, open flames and sparks. Avoid conditions that favour the formation of excessive

	mists and/or fumes.
Materials to avoid:	Strong oxidizing agents.
Hazardous Decomposition Products:	None known.
Conditions Contributing to Hazardous Polymerization	Will not occur.

11: Toxicological information

Acute Effects:

Swallowed	May be toxic if swallowed. SPECIES: Rat ; LD50 ;VALUE: 2737 mg/kg
Dermal	Not applicable.
Inhalation	Exposure to 590 mg/m3 (200 ppm) had no significant effect in a variety of behavioral and psychological tests. Short-term exposure to MEK alone does not appear to be a significant hazard, either occupationally or for the public. Experimental exposure to a concentration of 794 mg/m3 (270 ppm) for 4 h/day had little or no effect on behavior, and a 5-min contact with liquid MEK produced no more than a temporary whitening of the skin. There is only one non-occupational report of acute toxicity to MEK. This resulted from accidental ingestion and appeared to produce no lasting harm. There is no evidence that occupational MEK exposure has resulted in death. There have been two reports of chronic occupational poisoning and one questionable report of acute occupational poisoning. In one of the chronic cases, exposure to 880-1770 mg/m3 (300-600 ppm) resulted in dermatoses, numbness of fingers and arms, and various symptoms such as headache, dizziness, gastrointestinal upset, and loss of appetite and weight. This paucity of incidents of reputed poisoning by MEK alone reflects both the low toxicity of MEK and the fact that it is most commonly used not on its own but as a component of solvent mixtures.
Eye	Causes serious eye irritation.
Skin	Causes mild skin irritation.

Chronic Effects:

Carcinogenicity	Not applicable.
Reproductive Toxicity	Not applicable.
Germ Cell Mutagenicity	Not applicable.
Aspiration	Not applicable.
STOT/SE	Not applicable.
STOT/RE	May causes damage to organs through prolonged or repeated exposure.

12: Ecological information

This product is not hazardous to the environment.

Product:

Persistence and degradability	No data available
Bioaccumulation	No data available
Mobility in Soil	No data available
Other adverse effects	No data available

13: Disposal considerations

Disposal Method:

Care should be taken to ensure compliance with national, regional, and local authority regulations. Packaging may still contain fumes and vapors that are flammable. Ensure that empty packaging is allowed to dry.

Product can be offered for recycling, recovery, or disposal through a suitably qualified or licensed contractor.
Suitable for disposal by incineration.

Precautions or methods to avoid: Avoid release to the environment.

14: Transport Information Table

This product is classified as a Dangerous Good for transport in NZ ; NZS 5433:2012

Road, Rail, Sea and Air Transport

UN No	1193
Class - Primary	3
Packing Group	II
Proper Shipping Name	METHYL ETHYL KETONE
Marine Pollutant	No
Special Provisions	If the product's individual container is below 1L, it can be transported as a non-DG as long as the product packaging is still labelled as per DG requirements and the driver is given safety information in accordance with Chapter 3.4 of the UNRTDG.
Hazchem Code	2YE

15: Regulatory information

This substance is classified hazardous according to the EPA Hazardous Substances (Classification) Notice 2017
EPA Approval Code: HSR001190
HSNO Classification: 3.1B, 6.1E(oral), 6.3B, 6.4A, 6.9B

HSW (HS) Regulations 2017 and EPA Notices	**Trigger Quantity**
Certified Handler	Not required
Location Certificate	100L(>5L), 250L(<5L)< 50L open
Tracking Trigger Quantities	Not required
Signage Trigger Quantities	250L (3.1B)
Emergency Response Plan	1000L (3.1B)
Secondary Containment	1000L(3.1B)
Restriction of Use	No person may use this substance described as a pesticide or a veterinary medicine. However, this substance may be used in the formulation of a pesticide or a veterinary medicine. For the purpose of this control— (a) pesticide includes, but is not limited to, a product intended for use as an acaricide, antifouling paint, avicide, fumigant, fungicide, insecticide, herbicide, miticide, molluscicide, piscicide, timber treatment preservative or vertebrate toxic agent (b) veterinary medicine has the same meaning given to it in the Agricultural Compounds and Veterinary Medicines Act 1997.

16: Disclaimer

Glossary
EC50 Median effective concentration.
EEL Environmental Exposure Limit.
EPA Environmental Protection Authority

HSNO Hazardous Substances and New Organisms.
HSW Health and Safety at Work.
LC50 Lethal concentration that will kill 50% of the test organisms inhaling or ingesting it.
LD50 Lethal dose to kill 50% of test animals/organisms.
LEL Lower explosive level.
OSHA American Occupational Safety and Health Administration.
TEL Tolerable Exposure Limit.
TLV Threshold Limit Value-an exposure limit set by responsible authority.
UEL Upper Explosive Level
WES Workplace Exposure Limit

References:

1. EPA Hazardous Substances (Safety Data Sheets) Notice 2017
2. Workplace Exposure Standards and Biological Exposure Indices Nov 2017 edition.
3. Assigning a hazardous substance to a HSNO Approval (Aug 2013).
4. Transport of Dangerous goods on land NZS 5433:2012
5. HSW (Hazardous Substances) Regulations 2017

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