

SOLVENT SUPPLIES LTD

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Section 1: Identification of the Material and Supplier

Product Name:	Methyl Ethyl Ketone (MEK)
Other Names:	Ethyl Methyl Ketone, 2-Butanone, Butanone
Recommended use:	Industrial Chemical, paint and ink manufacture
Chemical Family:	Oxygenated hydrocarbon
Company Name:	Solvent Supplies Limited
Address:	33 Miro Street, Otaki, New Zealand
Fax:	04 902 1857
Email:	ss1994ltd@gmail.com
Emergency Telephone:	New Zealand: 800 737 63 Monday to Friday 8.00am – 4.30pm New Zealand Poisons Centre: 0800 764 766 Australia: 1800 738 383 Australian Poisons Centre: 1800 131 126

Section 9 of SDS: Physical Characteristics (Typical)

Hazardous Nature:	This product is classified as hazardous under HSNO Criteria
Hazardous Classification:	3.1B, 6.1E (oral), 6.1E (aspiration), 6.3B, 6.4A, 6.9A
HSNO Approval Number:	HSR002650
Exposure Standards:	TWA: 445 mg/m ³ (150 ppm): STEL: 890 mg/m ³ (300 ppm)

Section 3 of SDS: Product Ingredients

Methyl ethyl ketone	78-93-3	100%
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For further ingredients information, please refer to the full SDS

Section 2: Hazards Identification

Hazardous Nature:

This product is classified as hazardous under HSNO criteria.

Hazardous Classification:

3.1B, 6.1E (oral), 6.1E (aspiration), 6.3B, 6.4A, 6.9B

Signal Word: Danger

Dangerous Goods Classification: 3



Hazardous Statements

H225 Highly Flammable liquid and vapour
H303 May be harmful if swallowed
H304 May be fatal if swallowed and enters airways
H316 Causes mild skin irritation
H319 Causes serious eye irritation
H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary Statements

P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P233	Keep container tightly closed.
P240	Ground container and receiving equipment.
P241	Use explosion-proof equipment.
P242	Use non-sparking tools.
P243	Take precautionary measures against static discharge.
P260	Do not breathe vapours.
P264	Wash hands and exposed skin thoroughly after handling.
P280	Wear protective gloves and eye protection.

Response Statements

P301+P310	If swallowed immediately a Poison Centre or doctor.
P331	Do not induce vomiting.
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.
P332+P313	If skin irritation occurs get medical advice.
P370+P376	In case of fire stop leak if safe to do so.

Storage Statement

P403+P235	Store in well-ventilated place. Keep cool.
P405	Store locked up.

Disposal Statement

P501	Dispose of product to a landfill in accordance with any local regulations.
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Section 3: Composition/Information on Ingredients

Common Name:	CAS No:	Proportion (% v/v)
Methyl ethyl ketone	78-93-3	100

Section 4:	First Aid Measures
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For advice contact **NATIONAL POISON CENTRE (NZ 0800 764 766)** or a doctor.

Ingestion:	If swallowed DO NOT induce vomiting. Obtain immediate medical advice. If vomiting occurs spontaneously, keep head below hips to prevent aspiration into lungs.
Skin/Hair Contact:	If skin or hair contact occurs, wash with large amounts of running water. Seek medical attention if irritation persists.
Eye Contact:	Hold eyelids apart and flush the eye with running water for at least 15 minutes. Check and remove any contact lenses. Continue rinsing. Seek medical attention if irritation persists.
Inhalation:	Move the victim to fresh air and keep at rest in a position comfortable for breathing. Begin artificial respiration if breathing has stopped. Seek 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.

Section 5:	Fire Fighting Measures
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Shut off product that may 'fuel' a fire if safe to do so. Allow trained personnel to attend a fire in progress, providing fire-fighters with this Safety Data Sheet. Prevent extinguishing media from escaping to drains and waterways.

Suitable Extinguishing Media:	Alcohol resistant foam, water spray or fog. On small fires may use dry chemical powder, carbon dioxide, sand or earth. Keep adjacent containers cool by spraying with water. Do not use water jet.
Hazards from combustion products:	Carbon dioxide and carbon monoxide.
Specific Hazards:	Highly flammable liquid and vapour. Vapours are heavier than air so able to spread along ground and distant ignition is possible.
Precautions for Fire-fighters and special protective equipment:	Full protective clothing and self-contained breathing apparatus.
Hazchem Code:	2YE

Section 6:	Accidental Release Measures
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Accidental Release Controls:

Highly flammable liquid and vapour. Avoid contact with spilt material. Prevent any vapours from building up in confined areas. Vapours heavier than air can spread across the ground.

Emergency Procedures:

Prevent material 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
- ✚ Keep the public away from the area
- ✚ Prevent product from entering sewers, water courses or low lying areas
- ✚ Keep the public away from the area
- ✚ Do not walk through or touch spilled material
- ✚ Shut off the source of the spill if safe to do so
- ✚ Advise authorities if substance has entered a watercourse or sewer or has contaminated soil or vegetation
- ✚ Take measures to minimize the effect on the ground water
- ✚ Contain any spilled liquid with dry sand or earth or other non-combustible material
- ✚ A vapour suppressing foam may be used to reduce vapour
- ✚ Recover liquid spills by pumping – 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”

Section 7:

Handling and Storage

Precautions for safe handling:

The product is highly 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. Use grounding leads to avoid discharge (electrical spark).

Conditions for safe storage including any incompatibilities:

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

Incompatible Material:

Natural, neoprene or nitrile rubbers, aluminum, plastics and strong oxidizing agents.

Section 8:**Exposure Controls/Personal Protection****National Exposure Standards:**

The time weighted average (TWA) concentration, which means the highest allowable exposure concentration in an eight-hour day for a five-day working week for this product is: 445 mg/m³ (150ppm). The short-term exposure limit (STEL), which is the maximum allowable exposure concentration at any time is: 890 mg/m³ (300ppm).

Biological limit values:

BEI: 2 mg/L in urine (at end of work shift).

Engineering Controls:**Ventilation:**

The use of local exhaust ventilation is recommended to control the 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 Protection:**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 prevent from over-exposure by inhalation.

Recommended filter type:

Type-A Filter (organic vapour). Refer to AS/NZS 1715: *Selection, Use and Maintenance of Respiratory Equipment* and AS/NZS 1716: *Respiratory Protective Devices* for further details on the use of respiratory protective equipment.

Eye:

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

Skin/Body Protection:

Always wear long sleeves and long trousers or overalls, 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. Wear butyl rubber or poly vinyl alcohol type gloves.

Section 9:**Physical and Chemical Properties**

Property	Unit of Measurement	Typical Value
Appearance	-	Clear, colourless liquid
Odour	-	Not available

Odour Threshold	ppm	Not available
Melting Point/Range	°C	Not available
Boiling Point/Range	°C	79 – 80.5
Flash Point	°C	- 4
Flammability	-	Highly flammable
Specific Density @ 20°C	g/MI	0.804 – 0.806
Vapour Pressure @ 20°C	Pa	9500
Explosive Limits (LEL – UEL)	%	1.8 – 11.5
Vapour Density @ 20°C	kPa	2.4
Auto ignition Temperature	°C	515
Decomposition Temperature	°C	Not available
Viscosity @ 20°C	cSt	Not available
pH	-	Not available
Partition Coefficient	-	Not available
Percent Volatiles	%	100
Solubility in Water	% w/w	Miscible
Other Solubility	% w/w	Not available
Other Information	-	Volatile organic carbon content: 66.6% Evaporation rate (nBuAc=1): 3.7

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

Section 10:	Stability and Activity
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Chemical Stability:	Stable at room temperature and pressure.
Conditions to avoid:	Sources of heat and ignition and 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, stored mixtures with IPA, heat and sources of ignition.
Hazardous Polymerisation:	Will not occur.

Section 11:	Toxicological Information
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Acute Effects:

Ingestion:

May be harmful if swallowed. Ingestion of large amounts will result in central nervous system depression with symptoms such as headaches, dizziness, hallucinations, euphoria, tingling of the extremities, vomiting and possible loss of consciousness. Aspiration to the lungs may cause chemical pneumonitis which may be fatal.

Eye Contact:

The liquid and vapour is irritating to eyes and may cause inflammation. Repeated or prolonged exposure may produce conjunctivitis.

Skin Contact:

This product is irritating to the skin and prolonged or repeated exposure may result in dryness and cracking of skin.

Inhalation:

May be irritating to the respiratory system. Inhalation of high concentrations may result in nervous system depression which can lead to dizziness, headaches, nausea, vomiting and loss of appetite.

Chronic Effects:

Repeated or prolonged ingestion of this product could result in liver or kidney damage. Causes slight foetotoxicity but effects are seen only at high doses.

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:

Oral/Dermal LD50:	(Oral, rat)	2737 mg/kg
Inhalation LC50:	No data available	
Acute Toxicity:	(6.1A, 6.1B, 6.1C, 6.1D)	May be harmful if swallowed.
Aspiration Hazard:	(6.1E)	May be fatal if enters airways.
Respiratory Irritation:	(6.1E)	Not classified.
Skin Corrosion/Irritation:	(8.2A, 8.2B, 8.2C, 6.3A)	Causes mild skin irritation.
Serious eye damage/Irritation:	(8.3A, 6.3A)	Causes serious eye irritation.
Respiratory or Skin Sensitisation:	(6.5A, 6.5B)	Not classified.
Germ cell mutagenicity:	(6.6A, 6.6B)	Not classified.
Carcinogenicity:	(6.7A, 6.7B)	Not classified.
Reproductive Toxicity:	(6.8A, 6.8B, 6.8C)	Not classified.
Specific Organ Toxicity:	(Repeated and Single Exposure) (6.9A, 6.9B)	May cause damage to organs through prolonged or repeated exposure.
Narcotic Effects:	(6.9B)	Not classified.

Section 12:	Hazard Identification
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Ecotoxicity:

Aquatic Toxicity:	Fish toxicity, LC50 (96 hr):	Goldfish LC50: 2,400 mg/L
	Crustacean toxicity (Daphnia Magna), EC50 (48 hr):	LC50: >520 mg/L
	Green algae toxicity, EC50 (72 hr):	LOEC: 4,300 mg/L
	Blue-green algae toxicity (Cyanobacteria), EC50 (72 hr):	LOEC: 120 mg/L
Persistence/Degradability:	Oxidizes rapidly by photo-chemical reactions in air.	

Mobility:	This product is highly volatile and will rapidly evaporate to the air if released into the water. Product is soluble in water.
Bio-accumulative Potential:	No information available.
Other Information:	Not classed as eco-toxic.

Section 13:	Disposal Considerations
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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 residue and/or fumes and vapours that are highly 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 must be disposed as chemical waste in accordance with the local authority.

Section 14:	Transport Information
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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:	II	Pack Group:	II	Pack Group:	II
Hazchem:	2YE	Hazchem:	2YE	Hazchem:	2YE

Dangerous Goods Segregation:

This product is classified as a Dangerous Goods Class 3, packing group II.



Section 15:	Regulatory Information
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Country/Region:	New Zealand
Inventory:	AICS, NZIoC
Status:	Listed in NZIoC
HSNO Approval:	HSR002650: Solvents (Flammable) Group Standard 2017
HSNO/HSWA Control:	Refer to the above Group Standard, Health and Safety at Work Act 2015. www.epa.govt.nz and

	www.worksafe.govt.nz for further information on controls.
Certified Handler:	Not required.
Tracking:	Not required.
Restriction to Workplace:	Not applicable.
Signage:	Threshold quantity: 250 L
Fire Extinguishers:	Threshold quantity: 250 L
Emergency Response Plan:	Threshold quantity: 1000 L
Secondary Containment:	Threshold quantity: 1000 L
Other:	Location and transit depot test certificate: 100L (closed containers greater than 5 L); 1,250 L (closed containers up to and including 5 L); 50 L (open containers).
Agricultural Compounds and Veterinary Medicines Act 1997 (ACVM):	Not applicable.
Montreal Protocol on Substances that Deplete the Ozone Layer:	Not applicable.
Stockholm Convention:	Not applicable.
Rotterdam Convention:	Not applicable.

Section 16:	Other Information
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Reasons for issue: Update SDS format and company details.
Replaces SDS dated: 20 March 2015
New SDS issue date: January 2019

Abbreviations:

ACGIH: American Conference of Governmental Industrial Hygienists
AS/NZS: Standards Australia and Standards New Zealand
BCF: Bio-concentration Factor
BEI: Biological Exposure Index
CAS: Chemical Abstracts Number
CCID: Chemical Classification and Information Database
EC50: Effective Concentration, 50 percent
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
HSNO: Hazardous Substance & New Organisms Act 1996
HSWA: Health and Safety at Work Act 2015
IARC: International Agency for Research on Cancer
IC50: Half Maximal Inhibitory Concentration
LC50: Lethal Concentration, 50 per cent
LD50: Lethal Dose, 50 per cent
LEL: Lower Explosive Limit
LOAEL: Lowest-Observed-Adverse-Effects-Level
N/R: Not Regulated
NOAEL: No-Observed-Adverse-Effects-Level
NOEC: No Observed Effect Concentration
NZIoC: New Zealand Inventory of Chemicals

NZS 5433:	New Zealand Standard Transport of Dangerous Goods on Land
OECD:	Organisation for Economic Co-operation and Development
STEL:	Short Term Exposure Limit
TLV:	Threshold Limit Value
TWA:	Time Weighted Average
UEL:	Upper Explosive Limit

References:

- Supplier Safety Data Sheets
- EPA CCIC www.epa.govt.nz/database-search/chemical-classification-and-information-database-ccid
- Workplace Exposures Standards and Biological Exposure Indices. 9th Edition, published by WorkSafe New Zealand November 2017 www.worksafe.govt.nz/topic-and-industry/work-related-health/monitoring/exposure-standards-and-biological-exposure-indices
- US EPA Toxnet ChemIDPlus: www.chem.sis.nih.gov/chemidplus (January 19)
- OECD eChemPortal Substance Search: www.echemportal.org/participant/page.action?pageID+9

Safety data sheets are updated frequently. Please ensure you have a current copy.

Disclaimer:

Before using any product, read its label carefully to ensure that you understand its contents. The information contained herein is based on data considered accurate and reliable to the best of our knowledge and belief of the date compiled. However no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use hereof. Solvent Supplies Limited assumes no responsibility for personal injury or property damage to vendors, users or third parties caused by the material. Such users or vendor assume all risks associated with the use of the material. It is the user's responsibility to satisfy themselves as to the suitability and completeness of the information for their own particular use. The users must determine whether the use of the information and data is in accordance with local laws and regulations.