

ANDREW METHYL ETHYL KETONE

Chemwatch Material Safety Data Sheet
 For Domestic Use Only.
 Issue Date: 25-Sep-2008
 XC9477SD

CHEMWATCH 1193
 Version No:8
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Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME

ANDREW METHYL ETHYL KETONE

STATEMENT OF HAZARDOUS NATURE

Considered a Hazardous Substance according to the criteria of the New Zealand Hazardous Substances New Organisms legislation.

OTHER NAMES

C4-H8-O, CH3COC2H5, CH3COCH2CH3, 2-butanone, 2-butanone, "ethyl methyl ketone", MEK, "methyl acetone", butan-2-one, butan-2-one, "butanone technical", BP, 34170, 34171, 34172, "Shell 83202", "Era MEK", Redox, "Exxon MEK", Parks, "Chemport 3108LD"

PROPER SHIPPING NAME

ETHYL METHYL KETONE (METHYL ETHYL KETONE)

PRODUCT USE

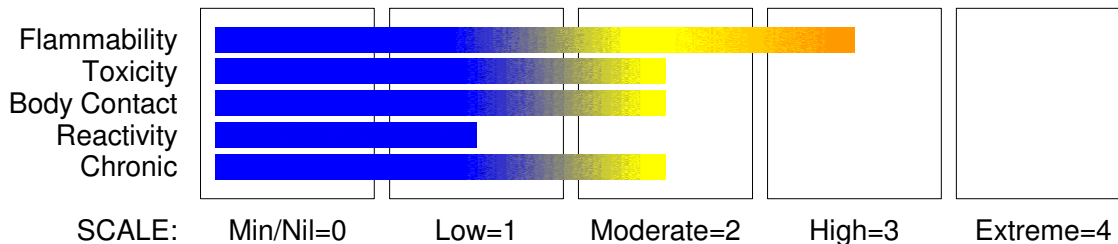
» The use of a quantity of material in an unventilated or confined space may result in increased exposure and an irritating atmosphere developing. Before starting consider control of exposure by mechanical ventilation.
 WARNING: Intentional misuse by concentrating/inhaling contents may be lethal.
 As a solvent in lacquers, thinners, solvent cements, adhesives, glues, in paint removers, nail polish removers, nail polish and cleaning solvents. In the manufacture of smokeless gunpowder and colourless synthetic resins.

SUPPLIER

Company: Damar Industries Limited
 Address:
 Eastgate Business Park
 800 Te Ngae Road
 Rotorua
 Telephone: +64 7 345 6007
 Emergency Tel: 0800 2436 2255
 Emergency Tel: 0800 CHEMCALL
 Fax: +64 7 345 6019

Section 2 - HAZARDS IDENTIFICATION

CHEMWATCH HAZARD RATINGS



GHS Classification

Acute Toxicity (Oral) Category 5
 Eye Irritation Category 2A
 Flammable Liquid Category 2
 Organ Damage single exposure Category 2
 Skin Corrosion/Irritation Category 3

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Section 2 - HAZARDS IDENTIFICATION



EMERGENCY OVERVIEW

HAZARD

DANGER

Gazetted by ERMANZ:

3.1B 6.1E 6.3B 6.4A 6.9B

Highly flammable liquid and vapour

May be harmful if swallowed

Causes mild skin irritation

Causes serious eye irritation

May cause damage to organs by skin contact.

PRECAUTIONARY STATEMENTS

Prevention

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Keep container tightly closed.

Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting equipment

Use only non-sparking tools.

Take precautionary measures against static discharge.

Do not breathe dust/fume/gas/mist/vapours/spray.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Wear protective gloves/protective clothing/eye protection/face protection.

Response

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

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue

rinsing.

IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician.

Call a POISON CENTER or doctor/physician if you feel unwell.

If skin irritation occurs: Get medical advice/ attention.

If eye irritation persists: Get medical advice/attention.

Storage

Store in a well-ventilated place. Keep cool.

Store locked up.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
methyl ethyl ketone	78-93-3	>99

Section 4 - FIRST AID MEASURES

NEW ZEALAND POISONS INFORMATION CENTRE 0800 POISON (0800 764 766)

NZ EMERGENCY SERVICES: 111

SWALLOWED

- If spontaneous vomiting appears imminent or occurs, hold patient's head down, lower than their hips to help avoid possible aspiration of vomitus.
- If swallowed do NOT induce vomiting.
- If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.

EYE

- » If this product comes in contact with the eyes:
- Wash out immediately with fresh running water.

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Section 4 - FIRST AID MEASURES

-
- Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.

SKIN

- » If skin contact occurs:
- Immediately remove all contaminated clothing, including footwear.
- Flush skin and hair with running water (and soap if available).

INHALED

- If fumes or combustion products are inhaled remove from contaminated area.
- Lay patient down. Keep warm and rested.

NOTES TO PHYSICIAN

» Any material aspirated during vomiting may produce lung injury. Therefore emesis should not be induced mechanically or pharmacologically.
for simple ketones:

BASIC TREATMENT

- Establish a patent airway with suction where necessary.
- Watch for signs of respiratory insufficiency and assist ventilation as necessary.

Section 5 - FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

- Alcohol stable foam.
- Dry chemical powder.

FIRE FIGHTING

- Alert Fire Brigade and tell them location and nature of hazard.
 - May be violently or explosively reactive.
- When any large container (including road and rail tankers) is involved in a fire, consider evacuation by 500 metres in all directions.

FIRE/EXPLOSION HAZARD

- Liquid and vapour are highly flammable.
 - Severe fire hazard when exposed to heat, flame and/or oxidisers.
- Combustion products include: carbon dioxide (CO₂), other pyrolysis products typical of burning organic material.
Contains low boiling substance: Closed containers may rupture due to pressure buildup under fire conditions.

FIRE INCOMPATIBILITY

- Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result.

Personal Protective Equipment

Chemical splash suit.

Section 6 - ACCIDENTAL RELEASE MEASURES

EMERGENCY PROCEDURES

MINOR SPILLS

- Remove all ignition sources.
- Clean up all spills immediately.

MAJOR SPILLS

- Clear area of personnel and move upwind.
- Alert Fire Brigade and tell them location and nature of hazard.

Personal Protective Equipment advice is contained in Section 8 of the MSDS.

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Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING

» Contains low boiling substance:

Storage in sealed containers may result in pressure buildup causing violent rupture of containers not rated appropriately.

- Check for bulging containers.
- Vent periodically.
- Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of exposure occurs.
- DO NOT allow clothing wet with material to stay in contact with skin.

SUITABLE CONTAINER

- Packing as supplied by manufacturer.
- Plastic containers may only be used if approved for flammable liquid.
- For low viscosity materials (i) : Drums and jerry cans must be of the non-removable head type. (ii) : Where a can is to be used as an inner package, the can must have a screwed enclosure.
- For materials with a viscosity of at least 2680 cSt. (23 deg. C).

STORAGE INCOMPATIBILITY

- Avoid reaction with oxidising agents.
- Avoid strong bases.

STORAGE REQUIREMENTS

- Store in original containers in approved flame-proof area.
- No smoking, naked lights, heat or ignition sources.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

Source	Material	TWA ppm	TWA mg/m ³	STEL ppm	STEL mg/m ³
New Zealand Workplace Exposure Standards (WES)	methyl ethyl ketone (Methyl ethyl ketone)	150	445	300	890

PERSONAL PROTECTION



RESPIRATOR

Type A Filter of sufficient capacity

EYE

- Safety glasses with side shields.
- Chemical goggles.

HANDS/FEET

- Wear chemical protective gloves, eg. PVC.
- Wear safety footwear or safety gumboots, eg. Rubber.

OTHER

- Overalls.
- PVC Apron.

ENGINEERING CONTROLS

» For flammable liquids and flammable gases, local exhaust ventilation or a process enclosure ventilation system may be required.

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Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Ventilation equipment should be explosion-resistant.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

» Attacks, softens and may dissolve.

Thin colourless highly flammable liquid; partly mixes with water (27.5%). Less soluble at higher temperatures.

Solubility of

water in MEK: 12.5% at 25 deg. C.

Penetrating, sharp smell. Very volatile and vapour is heavier than air. Mixes with alcohol, ether and hydrocarbon solvents, petrol, turps etc.

PHYSICAL PROPERTIES

Liquid.

Does not mix with water.

Floats on water.

Molecular Weight: 72.12

Melting Range (°C): - 85.9

Solubility in water (g/L): Partly miscible

pH (1% solution): Not applicable

Volatile Component (%vol): 100

Relative Vapour Density (air=1): 2.4 @ 20 C

Lower Explosive Limit (%): 1.8

Autoignition Temp (°C): 474

State: Liquid

Boiling Range (°C): 78- 80

Specific Gravity (water=1): 0.81 @ 20 C

pH (as supplied): Not applicable

Vapour Pressure (kPa): 9.5 @ 20 C

Evaporation Rate: 5.7 Fast BuAc=1

Flash Point (°C): - 6.7

Upper Explosive Limit (%): 12.0

Decomposition Temp (°C): Not available

Viscosity: Not Available

Material
log Kow

Value
0.26- 0.69

Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION

CONDITIONS CONTRIBUTING TO INSTABILITY

• Product is considered stable under normal handling conditions.

• Stable under normal storage conditions.

Segregate from strong oxidisers.

For incompatible materials - refer to Section 7 - Handling and Storage.

Section 11 - TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

» HARMFUL- May cause lung damage if swallowed.

» Irritating to eyes and respiratory system.

» Vapours may cause dizziness or suffocation.

» Vapours may cause drowsiness and dizziness.

» May produce skin discomfort*.

» Inhalation and/or skin contact may produce health damage*.

» * (limited evidence).

CHRONIC HEALTH EFFECTS

» Repeated exposure may cause skin dryness and cracking.

» Cumulative effects may result following exposure*.

» * (limited evidence).

TOXICITY AND IRRITATION

No data for this material.

REPROTOXIN

methyl ethyl ketone

ILO Chemicals in the electronics industry that have toxic effects on reproduction

Reduced fertility or sterility

continued...

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Section 12 - ECOLOGICAL INFORMATION

This material and its container must be disposed of as hazardous waste.

Section 13 - DISPOSAL CONSIDERATIONS

- Recycle where possible
 Otherwise ensure that:
- licenced contractors dispose of the product and its container.

Section 14 - TRANSPORTATION INFORMATION



Labels Required: FLAMMABLE LIQUID
HAZCHEM: None

UNDG:

Dangerous Goods Class:	3	Subrisk:	None
UN Number:	1193	Packing Group:	II
Shipping Name:	ETHYL METHYL KETONE (METHYL ETHYL KETONE)		

Air Transport IATA:

ICAO/IATA Class:	3	ICAO/IATA Subrisk:	None
UN/ID Number:	1193	Packing Group:	II
Special provisions:	None		
Shipping Name:	ETHYL METHYL KETONE		

Maritime Transport IMDG:

IMDG Class:	3	IMDG Subrisk:	None
UN Number:	1193	Packing Group:	II
EMS Number:	F- E, S- D	Special provisions:	None
Limited Quantities:	1 L		
Shipping Name:	ETHYL METHYL KETONE (METHYL ETHYL KETONE)		

Section 15 - REGULATORY INFORMATION

REGULATIONS

methyl ethyl ketone (CAS: 78-93-3) is found on the following regulatory lists;
GESAMP/EHS Composite List of Hazard Profiles - Hazard evaluation of substances transported by ships
IMO IBC Code Chapter 17: Summary of minimum requirements
IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk
New Zealand Biological Exposure Indices
New Zealand Hazardous Substances and New Organisms (HSNO) Act - Chemicals (single components)
New Zealand Hazardous Substances and New Organisms (HSNO) Act - Dangerous Goods
New Zealand Hazardous Substances and New Organisms (HSNO) Act - Hazardous Substances Register
New Zealand Inventory of Chemicals (NZIoC)
New Zealand Poisons Schedule [NLV]
New Zealand Workplace Exposure Standards (WES)
OECD Representative List of High Production Volume (HPV) Chemicals
United Nations Convention Against Illicit Traffic in Narcotic Drugs and Psychotropic Substances - Table II
United Nations List of Precursors and Chemicals Frequently used in the Illicit Manufacture of Narcotic Drugs and Psychotropic Substances Under International Control - Table II
Specific advice on controls required for materials used in New Zealand can be found at
<http://www.ermanz.govt.nz/search/registers.html>

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Section 16 - OTHER INFORMATION

NEW ZEALAND POISONS INFORMATION CENTRE

0800 POISON (0800 764 766)

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» Classification of the preparation and its individual components has drawn on official and authoritative sources as well as

independent review by the Chemwatch Classification committee using available literature references.

A list of reference resources used to assist the committee may be found at:

www.chemwatch.net/references.

» The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings.

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