

Comet Chemical Company Ltd.

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Materials Safety Data - METHYL ETHYL KETONE

Shipping Name	UN - 1193
Transport of Dangerous Goods Class	METHYL ETHYL KETONE
WHMIS Class	Class 3; Packing Group II
Material Use	B 2; D 2B
	solvent in paints

1. HAZARDOUS INGREDIENTS	CAS NUMBER	%	TWAEV (ppm)	LD ₅₀ ORAL	(mg/kg) SKIN	LC ₅₀ ppm INHALATION
Methyl Ethyl Ketone (2-Butanone)	78-93-3	100%	200	2350	6500	8000

2. PHYSICAL CHARACTERISTICS

Odour & Appearance	clear, colourless, liquid with sharp, sweetish acetone-like odour
Odour Threshold	(range) 2 - 85ppm (below TWAEV)
Vapour Pressure	78 mmHg (20°C)
Vapour Density (air = 1)	2.4
Boiling Point	80°C
Freezing Point	-86°C
Specific Gravity	0.806 (20°C)
Water Solubility	26% (20°C) – also soluble in alcohols, ethers, oils and other hydrocarbons

3. FLAMMABILITY & REACTIVITY

Flash Point	-4°C (range -6°C to -2°C), closed cup
Autoignition Temperature	404°C
Flammable Limits	1.8 - 11.5%
Hazardous Combustion Products	carbon monoxide, nitrogen oxides, smoke
Firefighting Precautions	foam, dry chemical, water fog, water spray only to cool, product floats on water - water jet spreads flames; firefighters must wear SCBA
Sensitivity to Static Discharge	not sensitive
Sensitivity to Mechanical Impact	not sensitive
Chemical Stability	stable; will not polymerize
Reactive With	strong oxidising agents, strong acids, strong alkalis, & chlorinated compounds
Dangerous Decomposition Products	none apart from "Hazardous Combustion Products"

4. TOXICOLOGY

EFFECTS OF ACUTE EXPOSURE

Skin Contact	drying, may irritate
Skin Absorption	yes; may be toxic by this route
Eye Contact	severely irritating, vapour irritating above 200 ppm; may damage eyes
Inhalation	irritating to respiratory system @ 350 ppm; headache, dizziness, drowsiness, intoxication
Ingestion	burning of mouth and throat; abdominal pain; headache, dizziness, drowsiness, intoxication

(Methyl Ethyl Ketone, cont'd)

EFFECTS OF CHRONIC EXPOSURE

General	prolonged exposure may cause skin cracking and dermatitis
Sensitising	no (only one reported human case of sensitisation)
Carcinogenic	not by RTECS criteria; tumorigenic in cats at 55,000 mg/kg
Reproductive Effect	experimental reproductive toxin in rodents at 1000 ppm; no effect known in humans
Synergistic With	not known
Estimated LD ₅₀	2350 mg/kg (oral, rat), 4050 mg/kg (oral, mouse); 6500 mg/kg (skin, rabbit)
Estimated LC ₅₀	8000 ppm = 23,500 mg/m ³ (inhalation, rat), 13,000 ppm (inhalation, mouse)

NOTE: Oral LD₅₀ & LC₅₀ vary markedly between species.

5. PROTECTIVE EQUIPMENT

Hands	butyl rubber gloves, also "Barricade" and "Tychem"
Eyes	safety glasses with side shields or chemical goggles
Respirator	not required if ventilation is adequate (see TWAEV, (1) above); otherwise use organic vapour cartridge
Clothing	impervious (hands, above) apron, boots, long sleeves, if splashing is anticipated

6. ENVIRONMENT

Leak Precaution	dyke to control spillage and prevent environmental contamination	
<<	<i>Fire potential. Blanket spill with foam as a precaution against accidental ignition.</i>	>>
Handling Spill	ventilate contaminated area; recover free liquid with explosion-proof pumps; absorb residue on an inert sorbent (dry sand, earth) and store in closed containers for disposal	
Waste Disposal	do not flush to sewer; may be incinerated in approved facility	

7. STORAGE & HANDLING

Store and use in a cool dry environment, away from sources of ignition, heat and oxidising agents. Use with adequate ventilation. Although this product is not a static accumulator, ground the container before handling to prevent static discharge which may cause ignition. Do not cut, drill, weld or grind on or near this container. Avoid prolonged contact with skin and wash work clothes frequently. An eye bath and safety shower should be available near the workplace.

8. FIRST AID

SKIN:	Wash with soap and plenty of water. Remove contaminated clothing and do not reuse until thoroughly cleaned or laundered.
EYES:	Wash eyes with plenty of water, holding eyelids open. Seek medical assistance promptly if there is any irritation.
INHALATION:	Remove from contaminated area promptly. CAUTION: Rescuer must not endanger himself! If breathing stops, administer artificial respiration and seek medical aid promptly.
INGESTION:	Give plenty of water to dilute product. Do not induce vomiting (NOTE below). Keep victim quiet. If vomiting occurs, keep victim's head below hips to prevent inhalation of vomited material. Seek medical help promptly.

NOTE: Inadvertent inhalation of vomited material may seriously damage the lungs. The risk and danger of this is greater than the risk of poisoning through absorption of this product. The stomach should be emptied under medical supervision, after the installation of an airway to protect the lungs.

Emergency telephone numbers	- weekdays from 8:00 - 5:00	(705) 436-5580
	at all other times	(800) 567-7455 (Philip Environmental)

Prepared for Comet Chemical Co. Ltd., by Nicholas Morgan, September 2002, Revised February 2004

The information herein is given in good faith but no warranty, expressed or implied, is made.

PLEASE ENSURE THAT THIS MSDS IS GIVEN TO AND EXPLAINED TO THE PERSON USING THIS PRODUCT.

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