

Comet Chemical Company Ltd.

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Materials Safety Data - GLYCEROL

(also Glycerine & Glycerin)

Shipping Name	UN – not regulated for transport
Transport of Dangerous Goods Class	not regulated for transport
WHMIS Class	not regulated for transport
Material Use	not controlled under WHMIS
	mfg. of resins, gums, pharmaceuticals, inks, etc.

1. HAZARDOUS INGREDIENTS	CAS NUMBER	%	TWAEV (ppm)	LD ₅₀ ORAL	(mg/kg) SKIN	LC ₅₀ ppm INHALATION
Glycerol (1,2,3-propanetriol)	56-81-5	100%	2.6 = 10 mg/m ³	4090	10,000	150 / 570 mg/m ³

2. PHYSICAL CHARACTERISTICS

Odour & Appearance	clear, colourless, odourless, hygroscopic, viscous liquid with a sweet taste
Odour Threshold	none - odourless
Vapour Pressure	0.0023mmHg / 3.1 x 10 ⁻⁴ kPa (50°C) – <i>essentially non-volatile</i>
Vapour Density (air = 1)	3.17
Boiling Point	290°C (decomposes at this temp into toxic acrolein)
Freezing Point	approx. 0°C – melts at 18°C (supercools readily)
Specific Gravity	1.264
Water Solubility	complete
Viscosity	1490 centipoise (20°C)

3. FLAMMABILITY & REACTIVITY

Flash Point	160°C (closed cup)
Autoignition Temperature	370°C
Flammable Limits	not known
Hazardous Combustion Products	carbon monoxide, nitrogen oxides, acrid smoke, acrolein
Firefighting Precautions	foam, dry chemical, water fog, water spray only to cool, 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 may cause explosion
Dangerous Decomposition Products	none apart from “Hazardous Combustion Products”

4. TOXICOLOGY EFFECTS OF ACUTE EXPOSURE

Skin Contact	essentially no effect
Skin Absorption	yes, slowly; no toxic effects anticipated by this route
Eye Contact	mildly irritating
Inhalation	product mist may irritate
Ingestion	little or no effect

(Glycerol, cont'd)

EFFECTS OF CHRONIC EXPOSURE

General	little to no effect (<i>there are reports of mild irritation following prolonged exposure</i>)
Sensitising	no
Carcinogenic	no effects documented in humans
Reproductive Effect	no effects documented in humans
Synergistic With	not known
Estimated LD ₅₀	4090 mg/kg (oral, mouse), 7750 mg/kg (oral, guinea pig), 12,600 mg/kg (oral, rat), 27,000 mg/kg (oral, rabbit); 10,000 mg/kg (skin, rabbit) <i>NOTE: The oral LD₅₀ varies nearly seven-fold between species.</i>
Estimated LC ₅₀	150 ppm [= 570 mg/m ³] (inhalation, rat)

5. PROTECTIVE EQUIPMENT

Hands	not required - neoprene or nitrile gloves may be worn
Eyes	safety glasses with side shields or chemical goggles
Respirator	not required if ventilation is adequate (see TWAEV, (1) above), or use organic vapour cartridge
Clothing	no special clothing required

6. ENVIRONMENT

Leak Precaution	dyke to control spillage and prevent environmental contamination
Handling Spill	ventilate contaminated area; recover free liquid with suitable pumps; absorb residue on an inert sorbent (dry sand, earth) and store in closed containers for disposal
Waste Disposal	do not flush to sewer ; mix with a suitable flammable solvent and incinerate 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. 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, October 2002; Revised August 2005*

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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