

# Comet Chemical Company Ltd.

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## Materials Safety Data - TRIETHANOLAMINE 85%

Shipping Name	UN - not regulated
Transport of Dangerous Goods Class	not regulated for transport
WHMIS Class	not regulated for transport
Material Use	D 2B
	mfg. of waxes, toilet goods, herbicides, cutting oils, textile industry lubricants; casein solvent, shellac, dyes . .

1. HAZARDOUS INGREDIENTS	CAS NUMBER	%	TWAEV (ppm)	LD <sub>50</sub> ORAL	(mg/kg) SKIN	LC <sub>50</sub> mg/m <sup>3</sup> INHALATION
Triethanolamine	102-71-6	85%	0.8	2200	16,000	not known
Diethanolamine	111-42-2	15%	0.5	700	8000	not known

### 2. PHYSICAL CHARACTERISTICS

Odour & Appearance	clear, pale yellow, viscous liquid with mild ammonia odour
Odour Threshold	0.3ppm (diethanolamine – not known for triethanolamine)
Vapour Pressure	below 0.01 mmHg (20°C)
Vapour Density (air = 1)	5
Boiling Point	268°C - 335°C - <i>begins to decompose at 170°C</i>
Freezing Point	16°C - supercools readily to 0°C or lower
Specific Gravity	1.12 <sub>20/20C</sub>
Water Solubility	100% (20°C)
pH	10 - 12 (strongly alkaline)

### 3. FLAMMABILITY & REACTIVITY

Flash Point	above 140°C
Autoignition Temperature	not known
Flammable Limits	not known
Hazardous Combustion Products	carbon monoxide, nitrogen oxides, ammonia, 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, acids, copper
Dangerous Decomposition Products	none apart from "Hazardous Combustion Products"

### 4. TOXICOLOGY EFFECTS OF ACUTE EXPOSURE

Skin Contact	irritating (mainly due to alkalinity), local reddening, & pain
Skin Absorption	slight; no toxic effects anticipated by this route
Eye Contact	mildly irritating, temporary effects only anticipated
Inhalation	irritating; nasal discomfort and discharge - product must be hot to generate sufficient vapour
Ingestion	irritating; burning sensation to mouth, throat & stomach; abdominal pain & sleeplessness may occur

## (Triethanolamine 85%, cont'd)

### EFFECTS OF CHRONIC EXPOSURE

General	experimentally repeated exposure causes liver and kidney damage in rodents reddening, swelling, itching & pain of frequently exposed skin
Sensitising	yes; may also cause allergic reaction
Carcinogenic	in rodents at over 16g/kg; no effects documented in humans; mutagen by RTECS criteria
Reproductive Effect	affects spermatogenesis in rodents at 18g/kg; no effects documented in humans
Synergistic With	not known
Estimated LD <sub>50</sub>	1650mg/kg (oral), 13,900 mg/kg (skin)
Estimated LC <sub>50</sub>	not known

### 5. PROTECTIVE EQUIPMENT

Hands	butyl, nitrile or neoprene rubber gloves
Eyes	chemical safety goggles
Respirator	not required unless hot product is handled or mist is generated - then use organic vapour cartridge
Clothing	impermeable (above) apron if splashing is anticipated

### 6. ENVIRONMENT

Leak Precaution	dyke to control spillage and prevent environmental contamination
Handling Spill	recover free liquid with suitable pumps; absorb residue on a sorbent (dry sand, earth) and store in closed containers for disposal
Waste Disposal	<b>do not flush to sewer</b> ; may be incinerated in approved facility; biodegrades rapidly in industrial waste treatment facility, <b>but only at aqueous concentrations around 10 ppm</b> ; otherwise neutralise with dilute hydrochloric acid and landfill the resulting salt

### 7. STORAGE & HANDLING

Store and use in a cool dry environment, away from sources of ignition, heat, oxidising agents and other substances named in (3) above. Over time, product can form a compound with iron (as found in a steel drum). If prolonged storage is anticipated, store in plastic or stainless steel. Product turns yellow on prolonged contact with air. If hot product is handled, use with adequate ventilation. Avoid 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. <b>CAUTION: Rescuer must not endanger himself!</b> 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.**

<File: TEA-85%>