
SECTION 1

Product Name: DIETHYLENE GLYCOL

Supplier's Name: APCO INDUSTRIES CO. LTD.
10 Industrial Street,
Toronto, Ontario M4G 1Z1

Information Telephone: 416-421-6161

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WHMIS Classification: Class D, Division 2, Subdivision A
Class D, Division 2, Subdivision B

TRANSPORTATION DANGEROUS GOODS CLASSIFICATION
Not a regulated product in Canada.

SECTION 2 - TOXICOLOGICAL PROPERTIES

Hazardous Ingredients: None
Diethylene Glycol 99% CAS No: 00 0111-46-6
LD50 (oral rat) 12,600 mg/kg RTECS (1991)
LD50 (skin rabbit) 11,900 mg/kg RTECS (1991)

SECTION 3 - PHYSICAL/CHEMICAL PROPERTIES

Boiling Point: 473.0 Deg. F 245.0 Deg. C
Vapour Pressure: <0.01 MMHG @ 20 Deg. C
Vapour Density (Air = 1): 3.66
Solubility in Water: Completely miscible
Specific Gravity: 1.117 @ 20/20 Deg. C
% Volatile by Volume: Not applicable
Appearance: Colourless liquid
Odour: Mild

Inhalation: At room temperature, exposures to vapours are unlikely due to physical properties; higher temperatures may generate vapour levels sufficient to cause adverse effects.

Systemic & Other Effects: Repeated excessive exposures may cause severe kidney and also liver and gastrointestinal effects. Signs and symptoms of excessive exposure may be central nervous system effects, nausea and/or vomiting, anesthetic or narcotic effects. Observations in animals include formation of bladder stones after repeated oral doses. Based on data from long-term animal studies, diethylene glycol is not considered a carcinogenic risk to man. No pertinent teratological data found on diethylene glycol itself. In teratology studies on rats and hamsters, triethylene glycol produced no teratogenic effects. Birth defects have been reported with ethylene glycol in rats at maternally toxic doses and in mice at doses which were apparently nontoxic to the mother. In animal studies, diethylene glycol has been shown not to interfere with reproduction. Results of in vitro ("test tube") mutagenicity tests have been negative.

SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE

Exposure Guideline(s): For diethylene glycol, the American Industrial Hygiene Association has established a Workplace Environmental Exposure Level of 50 ppm (total); 10 mg/cubic meter, aerosol only.

Ventilation: Good general ventilation should be sufficient. Local exhaust ventilation may be necessary for some operations.

Respiratory Protection: If respiratory irritation is experienced, use an approved air-purifying respirator.

Skin Protection: For brief contact, no precautions other than clean body-covering clothing should be needed. Use impervious gloves when prolonged or frequently repeated contact could occur. Remove contaminated clothing immediately, wash skin area with soap and water, and launder clothing before reuse.

Eye Protection: Use safety glasses.

ACTION TO TAKE FOR SPILLS/LEAKS

Small Spills: Soak up with absorbent material.

Large Spills: Dike to prevent contamination of waterways, then pump into suitable containers.

Waste Disposal: Burn in an approved incinerator in accordance with all federal, provincial and local requirements.

SECTION 8 - EMERGENCY FIRST AID PROCEDURES

Eyes: Irrigate immediately with water for at least 5 minutes.
Skin: Wash off in flowing water. Wash contaminated clothing before reuse.

Inhalation: Remove to fresh air if effects occur.
Consult a physician.

Ingestion: Induce vomiting if large amounts are ingested.
Consult medical personnel.

Note to Physician: No specific antidote. Supportive care. Treatment based on judgment of the physician in response to reactions of the patient. Over 100 deaths were caused by ingestion of an elixir of sulfanilamide in diethylene glycol in a 1937 incident. As a result of this incident, the single lethal oral dose for humans has been estimated to be one ml/kg of a 75% solution (Calvery and Klumpp, South. Med. J. 32:1105, 1939).

SECTION 9 - ADDITIONAL INFORMATION

Special Precautions to be Taken in Handling and Storage:
Practice reasonable caution to avoid skin and eye contact. Avoid breathing vapours from hot material. Trace quantities of ethylene oxide (EO) may be present in this product. While these trace quantities could accumulate in headspace areas of storage transport vessels, they are not expected to create a condition which will result in EO concentrations greater than 0.5 ppm (8 hour TWA) in the breathing zone of the workplace for appropriate applications. OSHA has established a permissible exposure limit of 1.0 ppm 8 hr TWA for EO. (Code of Federal Regulations Part 1910.1047 of Title 29)

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