




Material Safety Data Sheet

WHMIS (Pictograms)	WHMIS (Classification)	Personal protective equipment
No placard (handling and hazard label) required.	Not controlled under WHMIS (Canada).	

Section 1. Product and Company Identification

Product name Triethylene Glycol / Trade name		Associated Product's Item Code	glycol triethyl
Synonym	di-beta-hydroxyethoxyethane; 3,6-dioxaoctane-1,8-diol; ethanol, 2,2'-(ethylenedioxy)di-; 2,2'-ethylenedioxydiethanol; 2,2'-ethylenedioxyethanol; ethylene glycol dihydroxydiethyl ether; glycol bis(hydroxyethyl) ether; teg; trigen; triglycol; ethylene glycol-bis-(2-hydroxyethyl ether)	CAS #	112-27-6
Chemical family	Petrochemical.	Validation date	2013-01-08.
Chemical formula	C6-H14-O4	Print date	2013-01-09.
Manufacturer/Supplier	Recochem Inc. 850 Montee de Liesse Montreal, Quebec H4T 1P4 (514) 341-3550 www.recochem.com	In case of emergency	Recochem Inc. Communications and Regulatory Affairs Department (905) 878-5544
Material uses	Other non-specified industry: SOLVENT AND PLASTICIZER IN VINYL, POLYESTER AND POLYURETHANE RESINS; DEHYDRATION OF NATURAL GAS; HUMECTANT IN PRINTING INKS; EXTRACTION SOLVENT.		

Section 2. Hazards identification

Emergency Overview	WARNING! HARMFUL IF INHALED. Harmful by inhalation. Do not breathe vapor or mist. Avoid contact with eyes, skin and clothing. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use.
Potential Acute Health Effects	See section 11 for more detailed information on health effects and symptoms. Slightly hazardous by the following route of exposure: of eye contact (irritant), of ingestion. Non-corrosive to skin. Non-irritant to skin. Non-hazardous in case of inhalation. Non-irritant to lungs.
Note to Physician	Not available.

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**Section 3. Composition, information on ingredients****Canada**

Name	CAS number	Conc. (% w/w)
Ethanol, 2,2'-[1,2-ethanediylbis(oxy)]bis-	112-27-6	100

There are no other ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Section 4. First aid measures

Eye contact	Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 30 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.
Skin contact	In case of contact, immediately flush skin with plenty of water for at least 30 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.
Inhalation	Move exposed person to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Get medical attention if symptoms occur. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Ingestion	Wash out mouth with water. Remove dentures if any. Move exposed person to fresh air. Keep person warm and at rest. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if symptoms occur. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Notes to physician	No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Section 5. Fire-fighting measures

Products of combustion	Decomposition products may include the following materials: carbon dioxide carbon monoxide
Fire-fighting media and instructions	Use an extinguishing agent suitable for the surrounding fire.
Fire Hazards	Not available.
Explosion Hazards	Not available.

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**Section 6. Accidental release measures**

Small spill and leak	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Large spill and leak	Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

Section 7. Handling and Storage

Handling	Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
Storage	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Engineering controls	Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
Personal protection	<p>Eyes Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. Recommended: splash goggles</p> <p>Body Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.</p> <p>Respiratory Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.</p> <p>Hands Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. >8 hours (breakthrough time): nitrile rubber</p>

Occupational exposure limits

No exposure limit value known.

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Section 9. Physical and chemical properties

Physical State and Appearance	Liquid.	Odour	VERY MILD, SWEET
Molecular weight	150.2 g/mole	Taste	Not available.
pH	Not available.	Colour	Colorless.
Boiling/condensation point	285°C (545°F)	Volatility	100% (v/v)
Melting/freezing point	-7°C (19.4°F)	Evaporation rate	<0.005 (butyl acetate = 1)
Relative density	1.124	Odour Threshold	Not available.
Vapor pressure	<0.0013 kPa (<0.01 mm Hg)	Viscosity	Not available.
Vapour Density	5.2 [Air = 1]	Solubility	Easily soluble in the following materials: cold water and hot water. Soluble in the following materials: methanol.
VOC content	100 % (w/w)	Other Properties	Not available.
The product is:	Flammable.		
Auto-ignition temperature	371.01°C (699.8°F)		
Flash point	Closed cup: 176.68°C (350°F)		
Flammable limits	Lower: 0.9% Upper: 9.2%		
Fire hazards in the presence of various substances	Slightly flammable in the presence of the following materials or conditions: open flames, sparks and static discharge and heat.		

Section 10. Stability and reactivity

Stability	The product is stable. Under normal conditions of storage and use, hazardous polymerization will not occur.
Conditions of instability	Not available.
Incompatibility with various substances	Slightly reactive or incompatible with the following materials: oxidizing materials and alkalis.
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

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Section 11. Toxicological Information

Canada

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Ethanol, 2,2'-[1,2-ethanediylbis(oxy)]bis-	LC50 Inhalation Dusts and mists	Rat	>4400 mg/m3	4 hours
	LD50 Oral	Rat	>15000 mg/kg	-
	LD50 Oral	Rat	17000 mg/kg	-
Conclusion/Summary	Not available.			

Chronic toxicity

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Mutagenicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Reproductive Toxicity

Conclusion/Summary : Not available.

Section 12. Ecological information

For accidental discharges into the environment, see Section 6: "Accidental Release Measures" for suggested instructions.

Ecotoxicity : Inherently biodegradable

Canada

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
Ethanol, 2,2'-[1,2-ethanediylbis(oxy)]bis-	Acute LC50 35000 to 46000 µl/L Fresh water	Daphnia - Daphnia magna	<=24 48 hours
	Acute LC50 10 to 100 mg/L	Fish	96 hours
	Chronic NOEC 24 g/L Fresh water	Daphnia - Daphnia magna	48 hours
Conclusion/Summary	: Not available.		

Biodegradability

Conclusion/Summary : Not available.

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Section 13. Disposal considerations

Waste information The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Section 14. Transport information

Canada TDG Classification

Class - Not a TDG-controlled material.

Subsidiary class

Proper Shipping Name (Canada) TDG -

UN number Not regulated.

Packing Group -

Special provisions

No placard (handling and hazard label) required.

IMDG Classification

Class - Not controlled under IMDG.

Subsidiary class

Proper Shipping Name IMDG -

UN number Not regulated.

Packing Group -

Marine pollutant Not a pollutant.

Special provisions -

No placard (handling and hazard label) required.

United States DOT (Classification)

Class - Not a DOT controlled material (United States).

Subsidiary class

Proper Shipping Name (United States) DOT -

UN number Not regulated.

Packing Group -

Special provisions

No placard (handling and hazard label) required.

International Air Transport Association (IATA) For air shipment classification and associated regulations, please refer to the latest edition of IATA Dangerous Goods Regulations.

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Section 15. Regulatory information

WHMIS Classification (Canada) Not controlled under WHMIS (Canada).

Canada Domestic Substances List (DSL) Status This product and/ or all of its components are on the DSL.

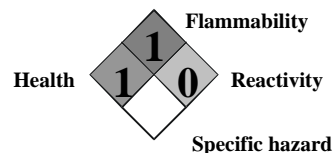
HCS Classification (U.S.A.) Toxic material

U.S.A. Regulatory Lists This product and/ or all of its components are on the TSCA inventory list.

Hazardous Material Information System (U.S.A.)

Health	1
Flammability	1
Reactivity	0
Personal protection	B

National Fire Protection Association (U.S.A.)



Section 16. Other information

Validated and verified by Compliance and Technical Information Manager on 2013-01-08 ph.# 905-878-5544.

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Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

MSDS are available at www.recochem.com