

MATERIAL SAFETY DATA SHEET

RECYCLED 80/20 ETHYLENE GLYCOL, INHIBITED



SECTION I - PRODUCT INFORMATION

MANUFACTURED BY: Re-Glycol Ltd. 4110-47 Avenue, Stettler, Alberta, T0C 2L0
Operations Manager (403)323-0047
CANUTEC 24-hour Emergency Telephone Number (613)996-6666
USE IN CASE OF DANGEROUS GOODS EMERGENCY

SUPPLIED BY: Re-Glycol Ltd.
4110 - 47 Avenue, Stettler, Alberta T0C 2L0

PRODUCT IDENTIFIER: **Ethylene Glycol 80/20**

PRODUCT USE: Various use

WHMIS Classification: Class D -1B (Toxic material)

MSDS PREPARED BY: Re-Glycol Ltd. 4110-47 Avenue, Stettler, Alberta, T0C 2L0
Operations Manager (403)323-0047

DATE OF PREPARATION: March 20, 2012

SECTION II - HAZARDOUS INGREDIENTS

Hazardous Component (Specific Chemical Identity)	% (weight to weight)	ACGIH-TLV	OSHA-PEL	Other Limits Recommended
Ethylene Glycol CASRN 107-21-1	80%	N/A	N/A	N/A
Water CASRN 7732-18-5	20%	N/A	N/A	N/A

* All components of this product are listed on the Canadian Domestic Substances List.

SECTION III - HAZARDS IDENTIFICATION

ROUTE OF ENTRY, INCLUDING SKIN CONTACT, SKIN ABSORPTION, EYE CONTACT, INHALATION AND INGESTION
Exposure can occur through inhalation, ingestion, eye or skin contact, and absorption through the skin

EFFECTS OF ACUTE EXPOSURE TO PRODUCT
No information on adverse inhalation or eye contact effects.
Mild skin irritation. If ingested may cause nausea, vomiting headache, drowsiness, symptoms of drunkenness, kidney damage, brain damage, convulsions, coma

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EFFECTS OF CHRONIC EXPOSURE	No information on significant adverse effects.
EXPOSURE LIMITS	No occupational exposure limits established.
IRRITANCY OF PRODUCT	Mild skin and eye irritant.
SENSITIZATION TO PRODUCT	None.
CARCINOGENICITY	Not a known carcinogen.
REPRODUCTIVE TOXICITY	Reproductivity tests in animals have been negative.
TERATOGENICITY	Teratogenicity tests in animals have been negative
MUTAGENICITY	No adverse mutagenic effects are anticipated.
NAME OF TOXICOLOGICALLY SYNERGISTIC PRODUCTS	Not known.

SECTION IV - FIRST AID MEASURES

SPECIFIC FIRST AID MEASURES

Skin Contact: Workers should flush the affected areas immediately with plenty of water for a minimum of 20 minutes, followed by washing with soap and water. Obtain medical attention if irritation persists. Clothing contaminated with product should be removed immediately, and provisions should be made for the safe removal of the chemical from the clothing.

Inhalation: Move victim to fresh air. Give artificial respiration ONLY if breathing has stopped. Give cardiopulmonary resuscitation (CPR) if there is no breathing AND no pulse. Obtain medical attention if symptoms persist.

Eye Contact: Immediately flush eyes with running water for a minimum of 20 minutes. Hold eyelids open during flushing. If irritation persists, repeat flushing. Obtain immediate medical attention. DO NOT remove contact lenses if worn.

Ingestion: Do not attempt to give anything by mouth to an unconscious person. If victim is alert and not convulsing, rinse mouth out and give 1/2 to 1 glass of water to dilute material. IMMEDIATELY contact local Poison Control Centre. Vomiting should only be induced under the direction of a physician or a poison control center. If spontaneous vomiting occurs, have victim lean forward with head down to avoid breathing in of vomitus, rinse mouth and administer more water. IMMEDIATELY transport victim to an emergency facility.

Notes to Physician: For ingestion, consider gastric lavage. Consider oxygen.

SECTION V - FIRE OR EXPLOSION

CONDITIONS OF FLAMMABILITY: Slight fire hazard AUTO-IGNITION TEMPERATURE: NAV

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MEANS OF EXTINCTION:	Alcohol resistant foam, carbon dioxide, regular dry chemical, water, alcohol resistant foam Large fires: Use alcohol resistant foam or flood with fine water spray.	HAZARDOUS COMBUSTION PRODUCTS:	Products may form carbon dioxide and carbon monoxide, and various hydrocarbons.
FLASH POINT AND METHOD OF DETERMINATION:	NAV	EXPLOSION DATA - SENSITIVITY TO MECHANICAL IMPACT:	Not sensitive.
UPPER FLAMMABLE LIMIT:	NAV	EXPLOSION DATA - SENSITIVITY TO STATIC CHARGE:	Will not accumulate a static charge.
LOWER FLAMMABLE LIMIT:	NAV		

Fire should be fought upwind from the maximum distance possible. Keep unnecessary people away; isolate the hazard area and deny entry. Emergency personnel should stay out of low areas. Containers of product may explode in the heat of the fire and should be moved from the area if it is possible to do so safely. If this is not possible, cool exposed containers from the sides with water until well after the fire is out. Stay away from the ends of containers. Firefighters should wear a full set of protective clothing and a self-contained breathing apparatus.

SECTION VI - ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Do not wash to sanitary sewer. All spills - confine spill, soak up with approved absorbent, shovel product into approved container for disposal. Flush area with water, recover flush for proper disposal.

1. Persons not wearing protective equipment should be restricted from contaminated areas until cleanup has been completed.
2. Do not touch the spilled material; stop the leak if it is possible to do so without risk.
3. Notify safety personnel.
4. Remove all sources of heat and ignition.
5. For small liquid spills, take up with sand or other non-combustible absorbant material and place in containers for later disposal.
6. For large liquid spills, build dikes far ahead of spill in order to contain for later reclamation or disposal.

SECTION VII - HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Keep container closed when not in use; protect from abuse; protect from extreme temperatures, open flames and store in covered containment out of direct sun exposure. Keep this and other chemicals out of reach of children.

Workers should not eat, drink, use tobacco products, apply cosmetics, or take medication in areas where product is handled, processed or stored.

Workers who handle product should thoroughly wash hands, forearms, and face with soap and water before eating, using tobacco products, using toilet facilities, applying cosmetics, or taking medication.

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SECTION VIII - PREVENTIVE MEASURES

PERSONAL PROTECTIVE EQUIPMENT TO BE USED	Use protective gloves (Neoprene, Nitrile, Butyl, or Viton), clothing and approved eyewear (goggles are preferable or glasses with side shields, CSA or ANSI) based on the extent of the worker's potential exposure. Under conditions of frequent use or heavy exposure, respiratory protection may be needed. Respiratory protection is ranked in order from minimum to maximum. Consider warning properties before use. Any chemical cartridge respirator with organic vapor cartridge(s). Any chemical cartridge respirator with full face piece and organic vapor cartridge(s). Any air-purifying respirator with a full face piece and an organic vapor canister. For Unknown Concentrations or Immediately Dangerous to Life or Health - Any supplied-air respirator with full face piece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply. Any self-contained breathing apparatus with a full face piece.
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SECTION IX - PHYSICAL DATA

PHYSICAL STATE:	Liquid.	EVAPORATION RATE:	N.AV.
ODOR AND APPEARANCE:	Green. Odorless.	BOILING POINT:	124 C. @ 760 mm Hg
ODOR THRESHHOLD:	N/A	FREEZING POINT:	-52 C.
SPECIFIC GRAVITY:	1.11 @ 20 C.	pH:	6 - 11
VAPOR PRESSURE:	NAV	COEFFICIENT OF WATER/OIL DISTRIBUTION:	N.AV.
VAPOR DENSITY:	NAV		

SECTION X - STABILITY AND REACTIVITY DATA

CONDITIONS UNDER WHICH THE PRODUCT IS CHEMICALLY UNSTABLE:	Avoid heat, flames, sparks and other sources of ignition. Stable at normal temperatures and pressure.	CONDITIONS OF REACTIVITY:	Will not polymerize.
IMCOMPATIBLES:	Acids, bases, oxidizing materials.	HAZARDOUS DECOMPOSITION PRODUCTS:	Thermal decomposition products: miscellaneous decomposition products.

SECTION XI - TOXICOLOGICAL INFORMATION

Ethylene Glycol

LD 50 (Oral, Rat) = 4,700 mg/Kg

LD 50 (Dermal, Rabbit) = 9,350 mg/Kg

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SKIN CONTACT: No effect

SKIN ABSORPTION: slight; no toxic effects likely by this route

EYE CONTACT: may cause discomfort, blinking or tears; will not damage

INHALATION: little to no effect; low vapor pressure and high viscosity make inhalation unlikely

INGESTION: abdominal discomfort, nausea and vomiting may occur

EFFECTS OF CHRONIC EXPOSURE

GENERAL: high concentration aerosols (mists) may cause lung, kidney or liver injury

SENSITIZING: not a sensitizer

CARCINOGENIC: not a tumorigen, not a carcinogen

REPRODUCTIVE EFFECT: no known effect on humans

SYNERGISTIC WITH: not known

SECTION XII - ECOLOGICAL INFORMATION

FISH TOXICITY: 10.2 ug/L 96 hour(s) LC50 (Mortality) Rainbow trout, Donaldson trout (*Oncorhynchus mykiss*)

INVERTEBRATE TOXICITY: 343 ug/L 48 hour(s) EC50 (Immobilization) Water flea (*Daphnia magna*)

ALGAL TOXICITY: 16730 ug/L 11-14 hour(s) MATC (Growth) Red algae (*Champia parvula*)

FATE AND TRANSPORT:

BIOCONCENTRATION: 857 ug/L 24 hour(s) BCF (Rsidue) Striped mullet (*Mugil cephalus*) 0.035 ug/L

ENVIRONMENTAL SUMMARY:

Highly toxic to aquatic life.

SECTION XIII - DISPOSAL CONSIDERATIONS

WASTE DISPOSAL Dispose of in accordance with all federal, provincial, and local environmental regulations and laws.

SECTION XIV - TRANSPORT INFORMATION

SPECIAL SHIPPING Not a regulated product according to the Transportation of Dangerous Goods Act of Canada.

INFORMATION

Note: Transportation information provided is for reference only. Client is urged to consult CFR 49 parts 100-177, IMDGA, IATA, EC, United Nations TDG and WHMIS Canada, TDG information manuals for detailed regulations and exceptions covering specific container sizes, packaging materials and methods for shipping.

SECTION XV - REGULATORY INFORMATION

TSCA (Toxic Substance Control Act)

All components of this product are listed on the U.S. Substance Control Act Chemical Inventory (TSCA Inventory).

CERCLA (Comprehensive Response Compensation and Liability Act)

None

CPR (Canadian Controlled Products Regulations)

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulation and the MSDS contains all the information required by the Controlled Products Regulations.

WHMIS - Not controlled.

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IDL (Canadian Ingredient Disclosure List)

Components of the product identified by CAS number and listed on the Canadian Ingredient Disclosure List are shown in Section II

DSL / NDSL (Canadian Domestic Substances List / Non-Domestic Substances List)

Components of this product identified by CAS number are listed on the DSL and NDSL, or are otherwise in compliance with the New Substances Notification (NSN) regulations. Only ingredients classified as "hazardous" are listed in Section II unless otherwise indicated.

SECTION XVI - OTHER INFORMATION

Specific toxicity tests have been conducted on this product and can be supplied by a CFR representative upon request.

REVISION SUMMARY:

The MSDS has been revised in the following sections: no changes noted.

MSDS Prepared by: Re-Glycol Operations Manager

Re-Glycol Ltd. provides the information contained herein in good faith, but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgement in determining its appropriateness for a particular purpose. Re-Glycol Ltd. makes no representations or warranties, either express or implied, including without limitation any warranties of merchantability, fitness for a particular purpose with respect to the information set forth herein or the product to which the information refers. Accordingly, RE-GLYCOL LTD. WILL NOT BE RESPONSIBLE FOR DAMAGES RESULTING FROM USE OR RELIANCE UPON THIS INFORMATION.