



MSDS

(Material Safety Data Sheet)

SECTION #1 PRODUCT AND COMPANY IDENTIFICATION

TRADE NAME: **TOTAL UNIVERSAL COOLANT 50/50**

CHEMICAL NAME AND SYNONYMS: MIXTURE

MANUFACTURER/SUPPLIER'S NAME: TOTAL LUBRICANTS CANADA INC.
220, LAFLEUR
LASALLE, QUEBEC
H8R 4C9
Tel.: (514) 595-7579 or 1-800-463-3955

24 HOURS EMERGENCY: Call CHEMTREC 1-800-424-9300 or 703-527-3887

PRODUCT USE: Coolant and antifreeze.

WHMIS CLASS AND DESCRIPTION -



Class D-2A: Material causing other toxic effects (Very toxic).

SECTION #2 COMPOSITION/INFORMATION ON INGREDIENTS

NOM	%	No CAS
ETHYLENE GLYCOL	45-55	107-21-1

Other Hazardous System Classification : According to the NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) and Hazardous Materials Identification System (HMIS, USA):

NFPA	HEALTH	HMIS	
2	HEALTH	2	MODERATED RISK
1	FLAMMABILITY	1	WEAK RISK
0	REACTIVITY	0	NO SIGNIFICANT RISK
	INDIVIDUAL PROTECTION	B	Eye protection and gloves are recommended

ADDITIONAL REGULATORY INFORMATION

- No hazardous ingredients as defined by the Canadian Hazardous Products Act (BILL C70) or by OSHA 29 CFR 1910.1200.
- Canadian DSL status: All ingredients are listed.
- * A4 (Not classifiable for humans or animals.) by ACGIH. Ethylene glycol did not cause cancer in long term animal studies. No components of this product have been found carcinogenic or potential carcinogen. Does not contain

ingredients that are listed as carcinogenic or potential carcinogen by OSHA, IARC or the U.S. National Toxicology Program (NTP). This product or its components have no teratogenic or mutagenic effects known.

SECTION #3 PHYSICAL DATA

PHYSICAL STATE AT 25°C	Liquid
POUR POINT:	-37°C
BOILING POINT:	> 100°C
DENSITY (g/cm ³ at 15°C):	1.1 to 1.2
VAPOR PRESSURE (mm Hg at 20°C):	0.06
VISCOSITY (cSt at 100°C):	No Object
EVAPORATION RATE:	0.01 compare to butyl acetate
SOLUBILITY IN WATER:	Soluble
APPEARANCE ET ODOR:	Green liquid with characteristic odor

SECTION #4 STABILITY AND REACTIVITY

STABILITY:	Stable
CONDITIONS TO AVOID:	Avoid excessive heat, open flames and formation of oil mist.
PRODUCTS TO AVOID:	Oxidizing agents, strong acids and bases.
HAZARDOUS DECOMPOSITION PRODUCTS:	N/A
POLYMERIZATION:	Will not occur

SECTION #5 FIRE FIGHTING MEASURES

SPECIAL CONDITION:	May be combustible at high temperature.
FLASH POINT (COC):	NONE
FLAMMABILITY LIMITS IN AIR: (% PER VOLUME)	LEL: 3.2 UEL: 15.3
AUTOIGNITION TEMPERATURE (°C):	400
EXTINGUISHING MEDIA:	Foam, Dry chemical and CO ₂
HAZARDOUS COMBUSTION PRODUCTS:	Normal combustion products, CO and CO ₂ .
SPECIAL FIRE FIGHTING PROCEDURES:	Do not enter confined fire space without adequate protective clothing and an approved positive self-contained breathing apparatus. Use water to cool fire exposed containers.

SECTION #6 TOXICOLOGICAL INFORMATION

PRODUCT	SPECIES	LD ₅₀ ORAL	LD ₅₀ DERMAL	LC ₅₀ INHALATION	HRS
Ethylene Glycol	Rat	> 4000 mg/Kg		N/A	---
Ethylene Glycol	Rabbit	---	> 9500 mg/Kg	---	---

INHALATION: Prolonged exposure to high vapor concentration of this product can cause headache, dizziness and nausea. Short-term overexposure can cause an irritation to the respiratory passages.
Exposure limit to the mist: 100 mg/m³ (TLV/TWA, ACGIH).

CONTACT WITH EYES: May cause eye irritation.

SKIN CONTACT: May cause skin irritation. Heated material may cause skin burn with direct contact..

INGESTION: Toxic by ingestion. HARMFUL OR FATAL IF SWALLOWED.
Ethylene glycol is more acutely toxic to humans than to animals. The lethal dose in humans is estimated to be 100mL (3 ounces).
May cause abdominal discomfort or pain, nausea, vomiting, dizziness, central nervous system effects and coma.
Cardiac failure, pulmonary edema and severe kidney damage may develop.
Small amounts swallowed incidental to normal handling operations are not likely to cause injury; however swallowing amounts larger than that may cause serious injury, even death. Ethylene glycol is know to cause adverse effects on bone marrow and sperm of laboratory animals.

SECTION #7 ACCIDENTAL RELEASE MEASURES

SPILL AND LEAK PROCEDURES: Eliminate all ignition sources. Stop leak only if safe to do so. Absorb residue or small spills with absorbent material and remove to non-leaking containers for disposal.

SECTION #8 HANDLING AND STORAGE

STORAGE AND HANDLING: Store in cool, dry, ventilated area, away from heat and ignition sources. Use good personal hygiene. Always keep the container close.

SECTION #9 EXPOSURE CONTROLS / PERSONAL PROTECTION

VENTILATION: Mechanical ventilation is recommended.

RESPIRATORY PROTECTION: If mist present, chemical cartridge respirator is recommended.

GLOVES: Resistant gloves (Viton, Nitrile, Neoprene) are recommended when handling this material.

EYE PROTECTION: Chemical safety goggles are recommended.

OTHER PROTECTION: In confined spaces or where the risk of skin exposure is higher, resistant clothing or apron should be worn.

SECTION #10 DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHODS: Consult relevant local authorities. Reclaim or dispose of at a licensed waste disposal company. Incinerate with approval of appropriate local authority.

SECTION #11 FIRST AID

INHALATION: Remove person to fresh air. See a physician if irritation persists.

CONTACT WITH EYES: Flush immediately with water for at least 15 minutes.

CONTACT WITH SKIN: Wash contaminated skin with mild soap and water. See a physician if irritation persists.

INGESTION: Do not induce vomiting. Contact an Anti-Poison Center (1-800-463-5060). See section # 6 for more information.

<p><u>NOTE TO PHYSICIAN:</u> The signs and symptoms in ethylene glycol poisoning are those of metabolic acidosis, central nervous system depression and kidney injury. Clinical chemistry may reveal anion-gap metabolic acidosis and uremia. Treatment with ethanol inhibits the metabolism of glycol to oxalate. Early administration of ethanol may counter the toxic effects of ethylene glycol (cardiopulmonary effects attributed to metabolic acidosis and renal damage). Hemodialysis or peritoneal dialysis has been of benefit. Pre-existing skin, eye, and respiratory disorders may be aggravated by exposure to this product. Treat symptomatically and supportively.</p>

SECTION #12 HAZARDS IDENTIFICATION

INHALATION: Prolonged exposure to high vapor concentration of this product can cause headache, dizziness and nausea. Short-term overexposure can cause an irritation to the respiratory passages.
Exposure limit to the mist: 10 mg/m³ (TLV/TWA, ACGIH).

CONTACT WITH EYES: Mist of vapor from heated material may cause mild eye irritation.

SKIN CONTACT: Mist or vapour from heated materials may cause mild skin irritation. Heated product may cause thermal burns. Prolonged and repeated contact with this product can cause skin drying, which may result in skin irritation and dermatitis.

INGESTION: Toxic by ingestion. HARMFUL OR FATAL IF SWALLOWED.
Ethylene glycol is more acutely toxic to humans than to animals. The lethal dose in humans is estimated to be 100mL (3 ounces).
May cause abdominal discomfort or pain, nausea, vomiting, dizziness, central nervous system effects and coma.
Cardiac failure, pulmonary edema and severe kidney damage may develop.
Small amounts swallowed incidental to normal handling operations are not likely to cause injury; however swallowing amounts larger than that may cause serious injury,

even death. Ethylene glycol is know to cause adverse effects on bone marrow and sperm of laboratory animals.

CARCINOGENIC EFFECTS: Not know to cause cancer in long term animal study.

MUTRAGENIC EFFECTS: *in vitro* and *in vivo* mutagenic studies were negative.

TERATOGENIC EFFECTS: Terogenic effect in mice at levels below maternal toxicity.

DEVELOPMENT TOXICITY: Fetotoxic in mice at levels below maternal toxicity.

CHRONIC EFFECTS: Excessive exposure may cause central nervous systemm (CNS) depression, kidney failure and possibly liver effects. Repeated exposure to highly toxic material may produce general deterioration of health by accumulation in one or many organs. Impaired reproductive, liver, kidney and central nervous system fuctions from pre-existing disorders may be aggravated by exposure to this product. Pre-existing eye, skin and respiratory disorders may be aggravated by exposition to this product.

SECTION #13 ECOLOGICAL INFORMATION

ENVIRONMENTAL EFFECTS:

Do not allow product or runoff from fire control to enter storm or sanitary sewers, lakes, rivers, streams, or public waterways. Block off drains and ditches. Provincial regulations require and federal regulations may require that environmental and/or other agencies be notified of a spill incident. Spill area must be cleaned and restored to original condition or to the satisfaction of authorities.

BIODEGRADABILITY: BIODEGRADABLE. BIODEGRADATION UNDER AEROBIC STATIC LABORATORY CONDITIONS IS HIGH. This product is not expected to bioaccumulate through food chains in the environment. .

ECOTOXICITY IN WATER: >200 mg/L [IC 150, Algae.], 1 hour
>200 mg/L [IC 150, FISH.], 24 hours
>200 mg/L [IC 150, Daphnia.], 1 hour
Practically non-toxic to aquatic organism

SECTION #14 TRANSPORTATION INFORMATION

TRANSPORTATION (TDG)

Not a TDG controlled product

IDMG: Not controlled under IMDG

US DOT: In containers of 5000 lbs capacity or less, this product is exempt from DOT (non regulated).

SECTION #15 REGULATORY INFORMATION

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

THIS PRODUCT IS A WHMIS CONTROLLED SUBSTANCE (D-2A).

DSL/NDSL Status: This product, or all components, are listed on the Domestic Substances List, as required under the Canadian Environmental Protection Act. This product and/or all components are listed on the U.S. EPA TSCA Inventory.

Other Regulatory Status: No Canadian federal standard. Provincial criteria are likely and should be requested when notifying provincial authorities.

SECTION #16 ADDITIONAL INFORMATION

Prepared by: André St-Jean, Chemist

Revised on: January 27, 2014

We believe that technical information and recommendations contained herein to be reliable and accurate. However, we provide these data without warranty or guarantee of any kind, expressed or implied. We assume no responsibility for any loss, damage, or expense, direct or consequential, arising from the use of products described herein.