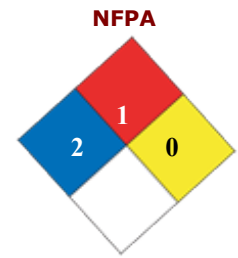




SECTION 1 - IDENTIFICATION

Product Name: Toro Extended Life Anti-Freeze
Product Code: 805-1048606
MSDS Manufacturer Number: 0455
Synonyms: Toro Peugeot Antifreeze Concentrate
Product Use/Restriction: Ethylene glycol coolant
Manufacturer Name: The Toro Company
Address: 8111 Lyndale Ave S
Bloomington,, Minnesota 55420
U.S.A.
General Phone Number: 1-952-888-8801
MSDS Creation Date: September 24, 2012
MSDS Revision Date: September 24, 2012
GHS Class: Skin Irritant, Category 2
Eye Irritant, Category 2
Specific Target Organ Toxicity, Category 3



HMIS

Health Hazard	2
Fire Hazard	0
Reactivity	1
Personal Protection	X

SECTION 2 - HAZARD(S) IDENTIFICATION

GHS Pictograms:



GHS Class: Skin Irritant, Category 2
Eye Irritant, Category 2
Specific Target Organ Toxicity, Category 3

Hazard Statements: Harmful if swallowed
May cause damage to organs through prolonged or repeated exposure

Precautionary Statements: Wash hands thoroughly after handling.
Do not eat, drink or smoke when using this product.
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
Rinse mouth.
Dispose of contents/container in accordance with Local, State, Federal and Provincial regulations.

Emergency Overview: WARNING! Irritant.

Route of Exposure: Eyes. Skin. Inhalation. Ingestion.

Potential Health Effects:

Eye:	Eye contact with product or vapors may result in irritation, redness, tearing, and blurred vision .
Skin:	Brief contact may cause slight irritation. Prolonged contact, as with clothing wetted with material, may cause more severe irritation and discomfort, seen as local redness and swelling. Other than the potential skin irritation effects noted above, acute (short term) adverse effects are not expected from brief skin contact.
Inhalation:	Vapors or mist, in excess of permissible concentrations, or in unusually high concentrations generated from spraying, heating the material or from exposure in poorly ventilated areas or confined spaces, may cause irritation of the nose and throat, headache, nausea and drowsiness.
Ingestion:	Harmful if swallowed Contains ethylene glycol and diethylene glycol, which are toxic when swallowed. A lethal dose for an adult is 1-2 mL per kilogram, or about 4 ounces (1/2 cup). Decreased urine output and kidney failure may also occur. Severe poisoning may cause death. Aspiration may occur during swallowing or vomiting, resulting in lung damage.
Chronic Health Effects:	May cause damage to organs through prolonged or repeated exposure
Signs/Symptoms:	Aspiration may occur during swallowing or vomiting, resulting in lung damage.
Target Organs:	Eyes. Skin. Respiratory system. Digestive system. Kidney.

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS#	Ingredient Percent	EC Num.
Ethylene glycol	107-21-1	90 - 97 %	
Diethylene glycol	111-46-6	<5 %	
Corrosion inhibitor	N/A	<5 %	
Water	7732-18-5	<4 %	

SECTION 4 - FIRST AID MEASURES

Eye Contact:	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Skin Contact:	IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
Inhalation:	IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
Ingestion:	IF SWALLOWED: Rinse mouth. Do not induce vomiting. Call a POISON CENTER or doctor/physician if you feel unwell.
Other First Aid:	Ethylene glycol (EG) and diethylene glycol (DEG) intoxication may initially produce behavioral changes, drowsiness, vomiting, diarrhea, thirst, and convulsions. EG and DEG are nephrotoxic (kidney damaging). End stages of poisoning may include renal damage or failure with acidosis. Supportive measures, supplemented with hemodialysis if indicated, may limit the progression and severity of toxic effects. For ethylene glycol poisoning intravenous ethanol is a recognized antidotal treatment; other antidotal treatments also exist for EG poisoning. Due to structural and toxicological similarities between EG and DEG, intravenous ethanol may be of benefit. Aspiration of this product during induced emesis may result in severe lung injury. If evacuation of stomach is necessary, use method least likely to

cause aspiration - such as gastric lavage after endotracheal intubation.
Contact a poison center for additional treatment information.

SECTION 5 - FIRE FIGHTING MEASURES

Flash Point:	118°C (244°F) for ethylene glycol.
Flash Point Method:	[ASTM D-92]Cleveland Open Cup (C.O.C).
Auto Ignition Temperature:	Data not available.
Lower Flammable/Explosive Limit:	Data not available.
Upper Flammable/Explosive Limit:	Data not available.
Extinguishing Media:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Protective Equipment:	As in any fire, wear Self-Contained Breathing Apparatus (SCBA), MSHA/NIOSH (approved or equivalent) and full protective gear.
Unusual Fire Hazards:	Dense smoke may be generated while burning. Toxic fumes, gases or vapors may evolve on burning. Heavy flammable vapors may settle along ground level. And low spots to create an invisible fire hazard. Vapors can flow along surfaces to distant ignition sources and flash back.
Hazardous Combustion Byproducts:	Primary combustion products are carbon monoxide, carbon dioxide, ammonia and water.

NFPA Ratings:

NFPA Health:	2
NFPA Flammability:	1
NFPA Reactivity:	0

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personnel Precautions:	Use proper personal protective equipment as listed in section 8. Evacuate area and keep unnecessary and unprotected personnel from entering the spill area.
Environmental Precautions:	Avoid runoff into storm sewers, ditches, and waterways.
Methods for containment:	Contain spills with an inert absorbent material such as soil, sand or oil dry.
Methods for cleanup:	Eliminate all ignition sources including those beyond the immediate spill area. Floor may be slippery; use care to avoid falling. Transfer liquids and solid diking material to separate suitable containers for recovery or disposal. Clean up spills immediately observing precautions in the protective equipment section. Avoid breathing vapor, aerosol or mist. Large spill, once contained, may be picked up using explosion proof, non-sparking vacuum pumps, shovels, or buckets, and disposed of in suitable containers for disposal. If a large spill (5,000 pounds or ~500 gallons) occurs notify appropriate authorities according to SARA 304 and/or CERCLA 102(a) requirements. Material will readily mix with water. If a large spill occurs notify appropriate authorities (normally the National Response Center or Coast Guard).

Other Precautions:

To prevent contamination of drinking water supplies, and poisoning of children, aquatic life, wildlife, and farm and domestic animals, ethylene glycol products should never be discarded onto the ground, into surface waters, or into storm sewers.

SECTION 7 - HANDLING and STORAGE

Handling:

Use with adequate ventilation. Avoid breathing vapor and contact with eyes, skin and clothing.

Storage:

Store in a cool, dry, well ventilated area away from sources of heat and incompatible materials. Keep container tightly closed when not in use.

Work Practices:

Handle in accordance with good industrial hygiene and safety practices. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Hygiene Practices:

Wash thoroughly after handling. Avoid contact with eyes and skin. Avoid inhaling vapor or mist.

SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION - EXPOSURE GUIDELINES

Engineering Controls:

Good general ventilation should be sufficient to control airborne levels. Otherwise, use appropriate engineering control such as process enclosures, local exhaust ventilation, or other engineering controls including use of a biosafety cabinet / fume hood to control airborne levels below recommended exposure limits.

Eye/Face Protection:

Wear appropriate protective glasses or splash goggles as described by 29 CFR 1910.133, OSHA eye and face protection regulation, or the European standard EN 166.

Skin Protection Description:

Protective laboratory coat, apron, or disposable garment recommended.

Hand Protection Description:

Use impervious gloves. Nitrile gloves are recommended.

Respiratory Protection:

A NIOSH approved air-purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.

Other Protective:

Follow good industrial hygiene practices when handling this material.

PPE Pictograms:



EXPOSURE GUIDELINES

Ethylene glycol:

Guideline ACGIH:

TLV-STEL: C 100 mg/m³ (Aerosol only)

SECTION 9 - PHYSICAL and CHEMICAL PROPERTIES

Physical State:	Liquid.
Color:	Orange to amber
Odor:	Mild, sweet odor.
Boiling Point:	176°C (349°F)
Melting Point:	Data not available.
Density:	8.91 pounds/ gallon @ 60°F
Specific Gravity:	1.12
Solubility:	Soluble in water.
Vapor Density:	>1 (Air = 1)
Vapor Pressure:	
Percent Volatile:	Data not available.
Evaporation Rate:	negligible
Evaporation Point:	Data not available.
pH:	Approximately 7.8 (50/50 blend)
Viscosity:	Data not available.
Flash Point:	118°C (244°F) for ethylene glycol.
Flash Point Method:	[ASTM D-92]Cleveland Open Cup (C.O.C).
Auto Ignition Temperature:	Data not available.

SECTION 10 - STABILITY and REACTIVITY

Chemical Stability:	Stable under normal conditions.
Hazardous Polymerization:	Will not occur.
Conditions to Avoid:	Extreme heat, sparks, and open flame. Incompatible materials, oxidizers and oxidizing conditions.
Incompatible Materials:	Water reactive materials. strong bases. Hydrogen fluoride. Ethyl vinyl ether.
Special Decomposition Products:	Oxides of sulfur. Decomposition products of this compound may include potentially hazardous byproducts, acrid, and toxic fumes.

SECTION 11 - TOXICOLOGICAL INFORMATION

Ethylene glycol :

RTECS Number:	KW2975000
Eye:	Eye - Rabbit; Standard Draize test. : 500 mg/24H; mild. Eye - Rabbit; Standard Draize test. : 1440 mg/6H; Moderate. (RTECS)
Skin:	Skin - Rabbit; Open irritation test : 555 mg; mild. (RTECS)

Inhalation: Inhalation - Rat LC: >200 mg/m³/4H; Details of toxic effects not reported other than lethal dose value
Inhalation - Mouse LC: >200 mg/m³/2H; Details of toxic effects not reported other than lethal dose value (RTECS)

Ingestion: Ingestion - Rat LD50: 4700 mg/kg; Details of toxic effects not reported other than lethal dose value. (RTECS)

Diethylene glycol:

RTECS Number: ID5950000

Eye: Eye - Rabbit Standard Draize test.: 50 mg

Skin: Administration onto the skin - Rabbit : 11890 mg/kg [Details of toxic effects not reported other than lethal dose value]
Administration onto the skin - Rabbit : 17300 uL/kg/30D (Intermittent) [Liver - Other changes Kidney/Ureter/Bladder - Changes in tubules (including acute renal failure, acute tubular necrosis) Related to Chronic Data - death]
Administration onto the skin - Human : 112 mg/3D (Intermittent)
Administration onto the skin - Rabbit : 500 mg

Ingestion: Oral - Rat LD50: 12565 mg/kg [Details of toxic effects not reported other than lethal dose value]
Oral - Mouse LD50: 23700 mg/kg [Behavioral - General anesthetic Behavioral - Muscle weakness Liver - Other changes]
Oral - Mouse LD50: 2300 mg/kg [Brain and Coverings - Other degenerative changes Liver - Other changes Kidney/Ureter/Bladder - Other changes]
Oral - Rat LD50: 12000 mg/kg [Brain and Coverings - Other degenerative changes Liver - Other changes Kidney/Ureter/Bladder - Other changes]

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity: This material may be toxic to aquatic organisms and should be kept out of sewage and drainage systems and all bodies of water.

Environmental Fate: No environmental information found for this product.

Bioaccumulation: Materials are estimated to have a low potential to bioconcentrate.

Biodegradation: These materials are estimated to have a moderate (>=30%) rate of biodegradation in a test for ready biodegradation

SECTION 13 - DISPOSAL CONSIDERATIONS

Waste Disposal: This product unadulterated by other materials may be classified as a nonregulated waste in some areas - but still needs to be disposed of at approved facilities.
Waste management should be in full compliance with federal, state, and local laws. Under RCRA it is the responsibility of the user of the product to determine at the time of disposal whether the product meets RCRA criteria for hazardous waste.
Antifreeze may be reclaimed. Contact local garages/shops for disposal. Look in a local telephone directory or internet for headings under, 'Waste', 'Waste Services', 'Waste Disposal' for companies licensed to handle such material. Additional information can be obtained from local EPA, DNR, Sewer and Land-Fill sites. Unused, packaged fluids may be donated to other companies or charities (fluids MUST be unused). The transportation, storage, treatment and disposal of RCRA waste material must be conducted in compliance with 40 CFR 262, 263, 264, 268 and 270. Disposal can only occur in properly permitted facilities. Check state and local regulations for any additional requirements as these may be more restrictive than federal laws and regulations. Chemical additions, processing or otherwise altering this material may make the waste management information presented in this MSDS incomplete, inaccurate or

otherwise inappropriate. Disposal of this material must be conducted in compliance with all federal, state, and local regulations.

SECTION 14 - TRANSPORT INFORMATION

DOT Shipping Name: Environmentally hazardous substances, liquid, n.o.s.
DOT UN Number: UN3082
DOT Hazard Class: 9
DOT Packing Group: III
DOT Exemption: These materials are exempt from DOT regulations unless quantities greater than 5000 pounds are transported.

SECTION 15 - REGULATORY INFORMATION

Clean Water Act RQ: Contact the National Response Center at 800-424-8802 in the case of a spill that enters waterways.

Risk Phrases: R36/37/38 Irritating to eyes, respiratory system and skin.
R22 Harmful if swallowed.

Safety Phrase: S20 When using do not eat or drink.
S24/25 Avoid contact with skin and eyes.
S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Ethylene glycol :

TSCA Inventory Status: Listed

Section 302 RQ: 5000 pounds

Section 311/312 Hazard Categories:

Acute Health Hazard:	Yes
Chronic Health Hazard:	Yes
Risk of ignition:	No
Sudden Release of Pressure Hazard:	No
Reactive Hazard:	No

State Regulations: Listed in the New Jersey State Right to Know List.
Listed in the Pennsylvania State Hazardous Substances List.

Canada DSL: Listed

Diethylene glycol :

TSCA Inventory Status: Listed

Pennsylvania: Listed

Canada DSL: Listed

SECTION 16 - ADDITIONAL INFORMATION

Label Hazard Warning: Harmful if swallowed
May cause damage to organs through prolonged or repeated exposure

Label Precautions: Wash hands thoroughly after handling.
Do not eat, drink or smoke when using this product.
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
Rinse mouth.
Dispose of contents/container in accordance with Local, State, Federal and Provincial regulations.

HMIS Health Hazard: 2

HMIS Fire Hazard: 0

HMIS Reactivity: 1

HMIS Personal Protection: X

MSDS Creation Date: September 24, 2012

MSDS Revision Date: September 24, 2012

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