MATERIAL SAFETY DATA SHEET

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME **SCOPE RADIATOR COOLANT/ANTIFREEZE** SAE **NA**

Product Use Radiator coolant and antifreeze **Product Number**

Uses advised against: No additional information available

Company Identification

United Grease and Lubricants Co LLC, PO Box 2685, Ajman, United Arab Emirates. Www.unitedgrease.com

Transportation Emergency Response	**Health Emergency**	**Product Information**
(971)(54) 2171575	(971)(54)2171575	(971)(54)2171575

SECTION 2 HAZARDS IDENTIFICATION

Classification: Not classified as hazardous according to 29 CFR 1910.1200 (2012)

Hazards Not Otherwise Classified: Not applicable

EC Index No **N/A** EC No **N/A** CAS No **N/A** REACH Registration No **N/A**

SECTION 2 Label Elements

Labelling according to Regulation (EC) No. 1272/2008 (CLP)

Acute Toxicity (Oral) Category 4 H 302

Specifc target organ toxicity - Repeated exposure, Cat 2 - H 373

Full text of H and EUH statements: See Section 16

Adverse Physico-chemical, human health and environmental effects

Hamrful If swalloed. May cause damage to organs (Kidneys) through prolonged and repeated exposure (Oral)

Hazard Pictograms (CLP)

GHS07

GHS08

Warning: Not applicable

Contains: Ethanediol, ethylyne glycol

Hazardous Statements (CLP):
H 302 - Harmful if swallowed
H 373 - May cause damage to organs (kidneys) thorough prolonged of repeated exposure (Oral)

Precautionary statements (CLP):
P 101 - If medical advice is needed, have product container or label at hand
P 102 - Keep out of reach of children
P260 - Do not breath vapours
P 264- Wash hands thoroughly after handling
P 301+P312 - IF SWALLOWED - Call a POISON CENTER, a doctor if you feel unwell
P 501 - Disposes off contents/container according to national or loval regulations

Other hazards (not relevant for classification)

Other hazards not contributing to the classificiation: The vapours are heavier than air and will accumulate in closed areas and at ground level with backfire hazard. This material can accumulate static charge by flow or agitation and can be ignited by static discharge. Any substance, in case of accidents involving pressurised circuits and the like, may be accidentally, injected under the skin, even without external damage. In such a case, the victim should be bought to a hospital as soon as possible, to get specialized medical treatment. Do not wait for symptoms to develop

This substance/mixuture does not meet the PBT criteria of REACH regulation, , Annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, Annex XIII
Contains no PBT/vPvB substances ≥0.1@ assessed in accordance with REACH Annex XIII

Component	
Ethanediol, ethylene glycol (107-21-1)	This substance/mixture does not meet the PBT criteria of REACH Regulation, Annex XIII This substance/mixture does not meet the vPvB criteria of REACH Regulation, Annex XIII
2-ethylhexanoic acid and its salts, with the exception of those specificed else-where in this Annex	This substance/mixture does not meet the PBT criteria of REACH Regulation, Annex XIII This substance/mixture does not meet the vPvB criteria of REACH Regulation, Annex XIII

This mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not idenfieid as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regular (EU) 2017/2100or Commission Regulation (EU) 2018/605 at a concentratiom

Component	
Ethanediol, ethylene glycol (107-21-1)	This substance is not included in the list established in accordiance with article 59(1) of the REACH for having endocrine disrupting properties, or is not indendified as having endocrine disrupting properties in accordance with the criteria set out in the Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605
2-ethylhexanoic acid and its salts, with the exception of those specificed else-where in this Annex	This substance is not included in the list established in accordiance with article 59(1) of the REACH for having endocrine disrupting properties, or is not indendified as having endocrine disrupting properties in accordance with the criteria set out in the Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS (SUBSTANCES)

Not applicable

3.2 Mxtures Composition/Information on ingredients
Ethylene Glycol
Rust Inhibitor
Water

Name	Product Identifier	%	Classification according to 1272/2008
Ethanediol, ethylene glycol	CAS 107-21-1 EC 203-473-3 ECINo. 603-027-00-1 REACH No. 01 2119456816-28	80-97	Axute Tox 4 (oral) H 302 (ATE=500 mg/kg or body weight STOT RE 2, H 373
2-ethylhexanoic acid and its salts, with the exception of those specificed else-where in this Annex	EC Index No. 607-230-00-6: Reach No. 01-2119488942-23	<3	Repr 2, H 361D

Full text of H and EUH statements are in section 16

SECTION 4 - First Aid Measures

General — In case of any doubt or persistent symptions, consult a physician

inhalation — Not expected to present a significant hazard under anticipated conditions of normal use. If casualty is unconcious and not breathing, place in the recovery position
In case of disturbances owing to inhalation or vapours or mists, remove the victim from exposure; keep at rest; if necessary seek medical attention

Skin Contact — Take off contaminated clothing and shoes. Wash thoroughly with soap and water.
If inflammation or irritation persists, seek medical advice.

Eye contact — Remove contact lenses, ir present and easy to do so. Rinse eyes thoroughly for at least 15 minutes. Keep eyelids wide apart. If irritation, blurred vision or swelling occurs and persists, obtain medical advice from a specialist

Ingestion — Rinse mouth thoroughly with water. In case of spontaneous vomitting, keep head low, to avoid the risk of aspiration into the lungs. If the person is fully conscious, make him/her drink plenty of water. Never give an unconscious person anything to drink. Send the casualty immediately to a hospital

Most important symptoms and effects, both acute and delayed

Systems/Injuries after inhalation

None under normal conditions at ambient temperatures

Systems/Injuries after skin contact — Prolonged or repeated skin contact may cause a slight transient irritation

Symptoms/injuries after ingestion

Harmful if swallowed, Ingestion of significant quantites (see section 11) may cause kidney damages, coma and death. The effects may be delayed

Symptoms/injuries upon intravenous administration — No information available

Chronic symptoms — May cuase damage to kidneys through prolonged or repeated exposure if swallowed

Indication of any immediate medical attention and special treatment needed

Treat symptomatically. Obtain medical attention if casualty has an altered state of consciousness or if symptons do not resolve — No information available.

SECTION 5 - FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA SUITABLE — Small-size fires: carbon dioxide, dry chemicals, foam, sand or earth.
Large fires - alcohol resistant foam or water fog (mist)
These means should be used by trained personnel only
Other extinguishing gases (according to regulations)

UNSUITABLE — none specific

EXTINGUISHING MEDIA — Simultaneous use of foam and water on the same surface is to avoided as water fog (mist). These means should be used by trained personnel

Special hazards arising from the substance or mixture

Fire Hazard — Not flammable. The vapours are denser than air and may travel along the ground
Distance ignition possible

Explosion Hazard — No direct explosion hazard. Heat may build pressure in tank and containers.
Rupturing closed vessels, spreading fire and increasing risk of burns and injuries

Hazardous decomposition products in case of fire

Incompelte combustion releases dangerous carbon monoxide, carbon di oxide and other toxic gases. Oxygenated compounds (aldehydes etc.)

Advice for firefighters

Firefighting instructions Shut off source of product, if possible. If possible, move containers and drums away from danger area. Spilled product which is not burning should be covered with sand or foam. Use water sprays to cool containers and surfaces exposed to the flames. If the fire cannot be controlled, evacuate area

Special protective equipment for firefighters

Wear personal protection equipment (see chapter 8). DO not enter fire area without proper protective equipment, including respiratory protection EN 443 EN 469 or EN 659. In case of a large fire or in confined or poorly ventalated spaces, wear full fire resistant protectionclothing and self containing breathing apparatus (SCBA), with a full face-piece operated in positive pressure mode

Other information In case of fire, do not discharge residual product, waste materials and run off water. Collect separately and use a proper treatment

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Stop or contain leak at the source, if safe to do so. Eliminate all ignition sources if safe to do so (e.g. electricity, sparks, fires, flares). Avoid contact with released material

For Non emergency Personnel

Protective Equipment See section 8

Emergency Procedures Keep non-involved personnel away from the area of spillage. Alert emergency personnel. Except in case of small spillages, the feasibility of any actions should always be assessed and advised, if possible, by a trained, competent person in charge of managing the emergency.

For Emergency Responders

Protective equipment Small spillages: normal antistatic working clothes are usually adequate. Large spillages: full body suit of chemically resistant and antistatic material. if necessary heat resistant and insulated. Work gloves providing adequate chemical esistance, specifically to aromatic hydrocarbons. Gloves made of PVA are not water-resistant, and are not suitable for emergency use. If contact with hot product is possible or anticipated, gloves should be heat-resistant and thermally insulated. Antistatic non skid safety shoes or boots, chemical resistant, if necessary heat resistant and insulated. Work helmet. Goggles and /or face shield, if splashes or contact with eyes is possible or anticipated. Respiratory protection: A half or full-face respirator with filter for organic vapours (and when applicable for H2S). A Self Contained Breathing Apparatus (SCBA) can be used according to the extent of spill and predictable amount of exposure. If the situation cannot be completely assessed, or if an oxygen deficiency is possible, only SCBA's should be used.

Emergency Procedures Notify local authorities according to relevant regulations.

Environmental precautions

Do not let the product flow into sewers or water courses, or in any way contaminate the environment. In case of contamination of environment compartments (soil, subsoil, surface or underground waters), remove contaminated soil when possible, and in any case treat all involved compartments in accordance with local regulations.The site should have a spill plan to ensure that adequate safeguards are in place to minimize the impact of episodic releases.

Methods and material for containment and cleaning up

For containment Soil. Contain spilled liquid with sand, earth or other suitable absorbents (nonflammable).Recover free liquid and waste materials in suitable waterproof and oil resistant containers. Clean contaminated area. Dispose of according to local regulations. Water: Confine the spillage. Remove from surface by skimming or suitable floating absorbents. Collect recovered product and other waste materials in suitable waterproof, oil resistant containers. Recover or dispose of according to local regulations.

Other Information Do not use solvents or dispersants, unless specifically advised by an expert, and, if required, approved by local authorities. Recommended measures are based on the most likely spillage scenarios for this material; however, local conditions (wind, air temperature, wave/current direction and speed) may significantly influence the choice of appropriate actions. Local regulations may also prescribe or limit actions to be taken. For this reason, local experts should be consulted when necessary.

Reference to other sections

For furthr information refer to section 8 'Exposure controls/personnel protection. For further information, refer to section 13

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling

Provide good ventilation n process area to prevent formation of vapour Keep away from sources of ignition No smoling. Sotre in dry, well ventilated area. Do not breathe fune/mist/vapours

Hygeine Measures Ensu Ensure that all relevant regulations regarding handling and storage with skin. Do not breathe fume/mist/vapours. Do not ingest. Do not smoke Donot eat and do not drink during usage. Do not clean hands with dirty or oil soaked rags. Do not re use clothes, if they are still contaminated. Keep away from food and beverages. Wash hands and other exposed areas with mild soap and water befor eating, drinking or smoking and when leaving work. Contaminated work clothing should not be allowed out of the workplace. Separate working clothes from town clothes Launder separately

Conditions for safe storage, including any incompatibilities

Stoage conditions Store in dry, well ventilated area. Keep away from open flames, hot surfaces and sources of ignition. Do not smoke.
If product is supplied in containers, keep only in the original container or in a suitable container for this kind of product. Keep containers tightly closed and properly labelled

Incompatible Products Strong acids, strong oxidants. Strong bases/alkalies

Incompatible materials Do not use zinc containers. Use only the original containers or others that have been approved for this product.

Storage area Storage area layout, tank design, equipment and operating procedures must comply with the local legislation. Storage installations should be designed with adequate bunds so as to prevent ground and water pollution in case of leaks or spills. Cleaning, inspection and maintenance of internal structure of storage tanks must be done only by properly equipped and qualified personnel as defined by national, local or company regulations.

Package and Containers	Store away from direct sunlight or other heat sources. Do not reuse empty containers
Packaging Materials	Store in glass, stainless steel or aluminium containers. Some synthetic materials may be unsuitable for containers or container linings depending upon material specification and intended use. Use PTFE, Polyethylene, Polypropylene, Natural rubber. Compatibility should be checked with the manufacturer, according to specifc use conditions
Specific End Uses	No information available

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

Natioinal occupational exposure and biological limit values

Ethanediol: Ethylene Glycol (107 21 1)
EU Indicative Occupational Expsoure Limit (IOEL)

Local name	Ethylene Glycol
IOEM TWA	52 mg/m^3 vapours
IOEL LV TWA (ppm)	20 ppm
IOEL LV STEL (Mg/M3)	104 mg/m^3 vapours
IOEL LV STEL (ppm)	40 ppm
Notes	Skin
Regulatory reference	Commission Directive 2000/39/EC

2-ethylhexanoic acid and its salts, with the exception of those specifiied elsewhere in this annex
Belgium - OEL

IOEL LV TWA - Belgium	5 mg/m^3 vapours
IOEL LV TWA - Ireland	4 mg/m^3 vapours
IOEL LV TWA - USA ACGIH	5 mg/m^3 vapours

Air contaminants formed No additional information available

DNEL AND PNEC

SCOPE ANTIFREEZE/FREEZO/RADIATOR COOLANT

DNEL/DMEL (additional information)

Additional information	Not applicable

PNEC

Additional information	Not applicable

Ethanediol: Ethylene Glycol (107 21 1)

DNEL/DMEL (Workers)

Long term - systemtic effects, dermal	106 mg/kg bodyweight/day
Long term local effects inhalation	35mg/m^3

DNEL/DMEL (General Population)

Acute, local effects, inhalation	7mg/m^3
long term systemic effects, dermal	53 mg/kg bodyweight/day

PNEC Water

PNEC Aqua, fresh water	10 mg/L
PNEC Aqua, marine water	1 mg/L
PNEC Aqua, intermittent fresh water	10 mg/L

PNEC Sediment

PNEC sediment, fresh water	37 mg / kg dwt
PNEC sediment, marine water	3.7 mg / kg dwt

PNEC Soil	
PNEC soil	1.53 mg / kg dwt
PNEC STP	
PNEC Sewage treatment plant	199.5 mg / kg dwt
2-ethylhexanoic acid and its salts, with the exception of those specifiied elsewhere in this annex	
Ethanediol: Ethylene Glycol (107 21 1)	
DNEL/DMEL (Workers)	
Long term - systemtic effects, dermal	2mg/kg bodyweight/day
Long term local effects inhalation	14 mg/m^3
DNEL/DMEL (General Population)	
Acute, local effects, inhalation	3.5 mg/m^3
long term systemic effects, dermal	1 mg/kg bodyweight/day
Long term systemic effects, oral	1 mg/kg bodyweight/day
PNEC Water	
PNEC Aqua, fresh water	398µg/L
PNEC Aqua, marine water	39.8µg/L
PNEC Aqua, intermittent fresh water	1 mg/L
PNEC Sediment	
PNEC sediment, fresh water	4.74 mg / kg dwt
PNEC sediment, marine water	474 mg / kg dwt
PNEC Soil	
PNEC soil	712 mg / kg dwt
PNEC STP	
PNEC Sewage treatment plant	71.7 mg / kg dwt

Note: The Derived No Effect Level (DNEL) is an estimated safe level of exposure that is derived from toxicity data in accord with specific guidance within the European REACH regulation. The DNEL may differ from an Occupational Exposure Limit (OEL) for the same chemical. OELs may be recommended by an individual company, a governmental regulatory body or an expert organization, such as the Scientific Committee for Occupational Exposure Limits (SCOEL) or the American Conference of Governmental Industrial Hygienists (ACGIH). OELs are considered to be safe exposure levels for a typical worker in an occupational setting for an 8-hour work shift, 40 hour work week,as a time weighted average(TWA)or a 15 minute shortterm exposure limit (STEL). While also considered to be protective of health, OELs are derived by a process different from that of REACH.

Control Banding No additional information available

Appropriate Engineering Controls

Ensure good ventilation of the work station. Minimize exposure to mists/vapours/aerosol

PERSONAL PROTECTIVE EQUIPMENT (for industrial or professional use)

Gloves, Protective clothing, safety glasses, safety shoes or boots

Personal Protective Equipment (Synbol(s):




Eye/Face Protection	Safety gkass DIN EN 166
Skin Protection	Long sleeved overalls. If necessary, refer to EN 340 and related standards for definition of characteristcs and performance according to the risk rating of the area. Wash contaminated clothing before use for protective gloves include:
Hand Protection	Protective gloces, adequate materials, nitrile (NBR) or PVC with a protection index >5 (permeation time > 240 min). Use gloves respecting all the conditions and within the limits set by the manufacturer. Replace gloves immeidately in case of cuts, holes or other signs of damages or degradation If necessary refer to the EM 374 staneards. Thickness of glove mtl >0,4 mm Personal hygiene is a key element for an effective hand care. Gloves must be worn only with clean hands. After wearing of gloves, hands must be carefully washed and dried
Respiratory Protection	No respiratory protection is normally required with sufficient ventilation Indepependtly from other substances action (technical modifications, operating procedures, and other means to limit the expsoure of workers) personal protection equipment can beused according to necesssity. Open or well ventialted spaces; if product is handled without adequate containkent; use full or half face masks with adequate filter for mists and organic vapours. (En 136/140/145). Closed or confined areas (ex tank interiors), the use of protection measures for airways (masks or self contained breathing apparatus) must be assessed according to the specific activity, as well as level and duration of predicted exposure (EN 136/140/145) Combination filter device (DIN EN 141). Combined gas/dust mask with filter type A Filter P (White)
Thermal Hazards	None in normal use conditions

Environmental exposure controls

Stoage areas/installations should be designed with adequate bunds so as to prevent ground and water pollution in case of leaks or spills. Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed

Consumer expsoure controls

Ensure adequate ventilation

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Attention: The data below are typical values and do not constitute a specification

Color	Blue, Green or colorless
Physical State	Liquid
Odor	Glycol
Odor Threshold	No data available
pH	7-9
Vapor Pressure	≤ 0.1 mPa (20 deg C)
Boiling Point	163 to 185 deg C (D 1120)
Solubility	Soluble in water, complete
Freezing Point	Not applicable
Melting Point	No data available
Density	1.108-1.116 kg/L @ 15^{o}C (59^{o}F) (Typical)
Viscosity	Not determined
Coefficient of Thermal expansion/^{0}F	No data available

Evaporation Rate	No data available
Decomposition Temperature	No data available
Octanol/Water Partition Coefficient	No data available
VOC Content	0% (EU, CH)
Flammability	Not flammable
Explosive properties	None
Oxidising properties	None
Explosive limits	3 to 53% (Ethylene glyocol)
Lower explosion limit	3% for EG
Upper explostion limit	53% for EG
Autoignition temperature	Not determined
Log Kow	Not determined
Relative density	Not determined
Relative vapour density at 20 deg C	Not determined
Particle characteristics	Not determined
Other information	
Information with regard to physical hazard classes	
Explosion Limits	3 to 53% (Ethylene glyocol)
Other safety characteristics	
Bulk density	1.1-1.14 (20 deg C)< D 4052

SECTION 10 - STABILITY AND REACTIVITY

Reactivity This mixuture does not offer any further hazard, except what is reported in the following paragraphs

Chemical Stability Stabel prdouct according to its intrinsic properties

Incompatibility with Other Materials: Strong oxidants and acids

Hazardous decomposition Products: Oxygenated compounds (aldehydes etc.). CO2/ CO

Possibility of Hazardous reactions None (in normal conditions of storage and handling).

Conditions to avoid Keep away from open flames, hot surfaces and sources of ignition. Avoid the build-up of electrostatic charge.

Hazardous decomposition products In exceptional cases (i.e prolonged storage in tanks contaminated with water, and presence of anaerobic sulfate-reducing microbial colonies), the product may undergo a degradation and generate small amounts of sulfur

SECTION 101 - TOXICOLOGIAL INFORMATION (mixture)

Acute toxicity (oral)	Harmful if swallowed
Acute toxicity (dermal)	Not classified (based on available data, the classification criteria are not met)
Acute toxicity (inhalation)	Not classified (based on available data, the classification criteria are not met)
Additional Information	According to composition - the toxif (fatal) dose for pure EG has been
Skin Corrosion/Irritation	estimated at 1.4 ml/kg (about 100 ml for an adult person)
	The effects may be delayed

SCOPE ANTIFREEZE/FREEZO/RADIATOR COOLANT	
ATE Oral	515.464 mg/kg of body weight
Ethanediol ; Ethylene glycol (107-21-1)	
LD 50 Oral rat	7712 mg/kg of body weight
LC 50 dermal rat	>3500 mg/mg of body weight
LC 50 inhalation - Rat	.2.5 mg/l (6 hours)
2-ethylhexanoic acid and its salts, with the exception of those specifiied elsewhere in this annex	
LD 50 Oral rat	3640 mg/kg of body weight

LC 50 dermal rabbit	>2000 mg/mg of body weight
Skinc orrosion/irritation	Not classified (based on available data, the classification criteria are not met)
	pH 7to 9
Additional information	According to composition
Serious eye damage/irritation	Not classified (based on available data, the classification criteria are not met)
	pH 7to 9
Additional information	According to composition
Respiratory or skin sensitization	Not classified (based on available data, the classification criteria are not met)
Additional information	According to composition
Germ cell mutagenicity	Not classified (based on available data, the classification criteria are not met)
Additional information	According to composition
Carcinogenicity	Not classified (based on available data, the classification criteria are not met)
Additional information	According to composition
Ethanediol ; Ethylene glycol (107-21-1)	
NOAEL (chronic, oral, animal/male,2 years)	1500 mg/kg of body weight (Mouse)
Reprouctive toxicity	Not classified (based on available data, the classification criteria are not met)
Additional information	According to composition
	This product conains a substance (2-ethylhexanoic acid, sodium salt)
	classified as Repr 2 H 361 (CLP) according to EU Criteria
	Suspected of damaging the unborn child
	The actual relevance of these effects in man is not certain
STOT Single exposure	Not classified (based on available data, the classification criteria are not met)
Additional information	According to composition
STOT repeated exposure	Not classified (based on available data, the classification criteria are not met)
Additional information	According to composition
	The ethylene glycol in this formualtion may cause intoxication, central nervous system depression(in coordination, dizziness), respiratory failure, level and kidney damage
NOAEL (orat, rat, 90 days)	150 mg/kg bodyweight.day 12 months
STOT repeated exposure	May cause damage to organs throguh prolonged or repeated exposure
2-ethylhexanoic acid and its salts, with the exception of those specifiied elsewhere in this annex	
NOAEL (orat, rat, 90 days)	300 mg/kg bodyweight.day 12 months
Aspiration hazard	May cause damage to organs throguh prolonged or repeated exposure
Additional information	
SCOPE COOLANT/RADIATOR ANTIFREEZE/FREEZO	
Viscosity, kinematic	Not determined
Information on other hazards	
This mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not idenfieid as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regular (EU) 2017/2100or Commission Regulation (EU) 2018/605 at a concentratiom greater than 0.1%	
Potential adverse human repeated	Harmful if swallowed. May cause damage to kidneys through prolonged or exposure if swallowed. Prolonged or repeated skin contact may cause redenning, iritation and dermatitis
Other information	None
SECTION 12 - ECOLOGICAL INFORMATION	

ECOTOXICITY/Ecolory-General This product is not considered harmful to the aquatic organisms nor to cause long term adverse effects in the environment.

An uncontrolled release to the environment may nevertheless produce a release to the environment may nevertheless produce a contamination of different environmental compartments (soil, underground, surface water bodies, aquifers). Handle according to general working hygiene practices to avoid pollution and release into the environment.

Ecology - Water ` Short term (acute) and long term (Chronic) Not classified (based on available data, the classification criteria are not met)

Ethanediol ; Ethylene glycol (107-21-1)	
LC 50 fish 1	15380 mg/l (LC 1o-96 h)
LC 50 fish 2	72860 ,g/l (Pimephales promelas)
EC50 Daphnia 1	8590 ,g/l (EC 10 - 48 H)
EC 50 Daphnia 2	100 mg/l
EC 50 96h ; algae `	3536-13000 mg/l
ERc50 (algae)	≥100 mg/l (EC 10)
NOEC (Chronic)	15380-32000 mg/l
2-ethylhexanoic acid and its salts, with the exception of those specifiied elsewhere in this annex	
LC 50 fish 1	180 mg/l (Oryzias latipes)
LC 50 fish 2	85.4 mg/l
EC50 Daphnia 1	49.3 mg/l (desmondesmus subspicatus)
NOEC (Chronic)	25 mg/l (21 d)

PERSISTENCE AND DEGRADABILITY

SCOPE FREEZO/COOLANT/RADIATOR ANTIFREEZE

Persistence and degradability — The most significant constituents of the product shuld be considered as 'readily biodegradable'

Ethanediol ; Ethylene glycol (107-21-1)	
Persistence and degradability	Readily biodegradable
Biochemical oxygen demand (BOD)	0.36 to 0.4 O_2/g of susbtance
Chemical oxygen demand (COD)	1.21 O_2/g of susbtance
ThoD	1.26 O_2/g of susbtance
2-ethylhexanoic acid and its salts, with the exception of those specifiied elsewhere in this annex	
Persistence and degradability	Readily biodegradable

BIO ACCUMULATIVE POTENTIAL

SCOPE FREEZO/COOLANT/RADIATOR ANTIFREEZE

Log Kow	Not determined
Bioaccumulative Potential	Not determined

SCOPE FREEZO/COOLANT/RADIATOR ANTIFREEZE

Log Kow	-1.36
2-ethylhexanoic acid and its salts, with the exception of those specifiied elsewhere in this annex	
Log Kow	2.7

Mobility in Soil

SCOPE FREEZO/COOLANT/RADIATOR ANTIFREEZE

Mobility in soil	ethanediol; ethylyne glycol
Ecology Soil	No data available

Results of PBT and vPvB assessment

SCOPE FREEZO/COOLANT/RADIATOR ANTIFREEZE

This substance/mixuture does not meet the PBT criteria of REACH regulation, , Annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, Annex XIII

Results of PBT-VpVB assessment: The components inthis formulation do not meet the criteria for classification as PBT or vPvB. The prodcut should be considered ;Not persistent' in the environment according to the REACH Annex XIII criteria (Point 1.1)

ENDOCROINE DISRUPTING PROPERTIES

This mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not idenfieid as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regular (EU) 2017/2100or Commission Regulation (EU) 2018/605 at a concentratiom greater than 0.1%

Other adverse effects: None

SECTION 13 - DISPOSAL CONSIDERATIONS

Waste treatment methods: Do not dispose of the product, either new or used, by dumping on the ground, or discharging into seweres, tunnels, lakes or water courses. Deliver to a qualified official collector

Sewage disposal considerations: Do not apply industrial sludge to natural soils;. Sludge should be incinerated, contained or reclaimed Dispose off in a safe manner in accordance with local and national regulations

Product/Packing disposal consi-iderations: European Waste Catalogue code (s) (Decision 2001/118/CE): 16 01 14* (ANTIFREEZE FLUIDS CONTAINING DANGEROUS SUBSTANCES). This EWC code is only a general indication and takes into account the original composition of the product and its intended use. The user has the responsibility of choosing the right EWC code, considering the acutal use of the product, alterations and contaminations

Additonal information: Do not cut, weld, bore, burn or incinerate emptied containers, unless they have been cleaned and declared safe

Ecology- waste materials: The product as it is does not contain halogenated substances

EURAL Code (EWC): 16 01 14*(antifreeze fluids containing dangerous substances)

SECTION 14 - TRANSPORT INFORMATION

In accordance with ADR/IMDG/IATA/AND/RID

ADR	IMDG	IATA	ADN	RID
UN Number or ID Number				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
UN Proper shipping name				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
Transport hazard class(es)				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
Packing Group				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
Environmental hazards				
regulated	Not regulated	Not regulated	Not regulated	Not regulated

Special precautions for user:

Overland transport	Not regulated
Transport by Sea	Not regulated
Air transport	Not regulated
Inland waterway transport	Not regulated
Rail transport	Not regulated
Maritime transport in bulk according to IMO instruments	
IBC Code	Not applicable

SECTION 15 - REGULATORY INFORMATION (Mixture)

EU Regulations

EU Regulation list (reach Annex XVIII)

Reference code	Applicable on	Entry title or description
3(b)	Scope freeze/coolant antifreese/ethanediol ethylene glycol, 2-ethylhexanoic acid and its salts, with the exception of those specified elsewhere in this annex	Substances or mixutures fulfilling the criteria for any of the followng hazard classes or categories set out in annex 1 to regulation (EC) No 1272/2008. Hazard classes 3.1 to 3.6. 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10

No ingredients are inlcuded in the REACH Candidate list (?0.1% m/m)
Contains no substances listed on REAH Annex XIV (Authorisation list)
Contains no substances listed on the PIC list (Regulation EO 640/2012) concerning the export and import of hazardous chemicals
Contains no substances listed on the POP List (Regulation EU 2019/1012 on persistent organic pollutants
Contains no substances listed on the Ozone depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)
Contains no substances listed on the explosive precursors list (Regulation EU 2019/1148 on the marketing and use of explosive precursors)
Other information, restriction and prohibition regulations

EC No. 1907/2006	EC 1272/2008	67/548/EEC	1999/45/EC	1907/2006	89/931/CEE
89/654/CEE	89/655/CEE	90/269/CEE	90/270/CEE	90/394/CEE	90/679/CEE
93/88/CEE	95/63/CE	97/42/CE	98/24/CE	99/38/CE	99/92/CE
2001/45/CE	2003/10/CE	2003/18/CE	2012/18/CE	2004/42/CE	98/24/EC
98/25/CE	1005/2009	850/2004	79/117/EEC	649/2012	

Contains no substances listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on Mrket of certain substances used in the illicit manufacture ofnarcotic drums and psychotropic substances
National Regulations
National adoption of EU Directives concerning health and safety on the workplace
Relevant national laws of protection of the health of pregnant workers (national adoption of 92/85/EEC_
National adoption of EU directives concerning control of major-accident hazards involving dangerous substances (2012/18/CE). Relevant nationallaws on prevention of water pollution

Chemical safety assessment

For this mixture a chemical safety assessment has not been carried out
A Chemical safety assessment has been carried out for the following components of this mixture:
Ethanediol' ethylene glycol
2-ethylhexanoic acid and its salts, with the exception of those specified elsewhere in this Annex

SECTION 16 - OTHER INFORMATION

Indication of Changes

SECTION 16	Changed item	Change	Notes
	SDS EU format according to commission regulation EU 2020/878		
1.1	Formula	Modified	
1.1	UFI	Added	
3	Composition/information on ingredients	Modified	

ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT

TLV - Treshold Limit Value	TWA - Time weighted average
STEL - Short term exposure limit	PEL - Permission expsoure limit
GHS - Globally Harmonized System	CAS - Chemical abstract service number
AC	IMO/IM
API - American Petroleum Institute	SDS - Safety Data Sheet
HMIS - Hazardous Materials Information System	NFPA - National Fire Protection Association (USA)
DOT - Department of Transport	NTP - National Toxicology Program (USA)
IARC - International agency for research on cancer	OSHA -
NCEL - New chemical exposure limit	EPA - Environmental Protection Agency
SCBA - Self contained breathing apparatus	NA - Not applicable
ND Not available	CSR - Chemical Safety Report
DNEL - Derived No effect Level	DMEL - Derived Minimum Effect Level
EC - 50 - Effective Concentration , 50%	EL50 - Effective Loading, 50%
IC 50 - Inhibition concentration, 50%	LC 50 - Lethal concentration, 50%
LD 50 -Lethal dose, 50%	LL50 - Lethal loading, 50%
LOAEL - Low observed adverse effects level	NOEL - No observed effects level
NOAEL No observed adverse effects level	OECD Organization for economic co-op and devmt
PNEC Predicted no effect concentration	PBT - Predicted, bioaccumulative, toxic
STOT - Single Target Organ Toxicity	STOT - RE (above) with repeated exposure
STOT - SE (Above) with single exposure	vPvB - Very persistent, very bioaccumulative
UVCB - susbtance of unkonw or variable composition, complex reaction products of bio materials	
WAF - Water accommodated fraction	

ADN - European agreement concerning the international carriage of dangerous goods by inward waterways

ADR- European agrement concerning the international carriage of dangerous goods by road

ATE - Acute Toxicity estimate

BCF-Bioconcentration factor

CLP - classification labelling packaging refulation -regulation EC No. 1272/2008

IATA - Internatinal air transport association

IMDG - Internation maritime dangerous goods

NOAEC - no observed adverse effect concentration

NOEC No observed effect concentration

REACH - Registration, authorisation and restriction of chemicals, regulations No 1907/2006

RID - regulation concerning the international carriage of dangerous goods by railways

STP - sewage treatment plant

Data sources This safety data sheet is based on the real characteristics of the components and their combination, taking into account the information provided by the suppliers

Training Advice - Provide adequate training to professional operators for the use of PPEs,

according to the information contained in this safety data sheet

Other information: Do not use the product for any purposes that have not been advised by the manufacturer

Full text of R-, H- and EUH-phrases

Acute Tox 4 (Oral)	Acute Toxicity (oral), category 4
Aquatic acute 1	Hazardous to the aquatic environment - acute Hazard, category 1
Aquatic chronic 1	Hazardous to the aquatic environment - CHronic Hazard, category 1
Aquatic chronic 2	Hazardous to the aquatic environment - CHronic Hazard, category 2
Aquatic chronic 3	Hazardous to the aquatic environment - CHronic Hazard, category 3
Aquatic chronic 4	Hazardous to the aquatic environment - CHronic Hazard, category 4
Eye Dam 1	Serious eye damage/eye irritation, category 1
Eye Irrt. 2	Serious eye damage/eye irritation, category 2
Repr. 2	Reproductive toxicity, Category 2
Skin Irrit.2	Skincorrosion/irritation, category 2
Skin Sens. 1B	Sensitisation - Skin, category 1B
H 302	Harmful if swallowed
H 315	Causes Skin Irritation
H 317	May cause an allergic skin reaction
H 318	Causes serious eye damage
H 319	Causes serious eye irritation
H 361f	Supsected of damaging fertility
H 400	Very toxic to acquatic life
H 410	Very toxic to acquatic life with long lasting effects
H 411	Toxic to acqualic life with long lasting effects

Full text of R-, H- and EUH-phrases (continued)

H 412	Harmful to aquatic life with long lasting effects
H 413	May cause long lasting effects to aquatic life
R 22	Harmful if swallowed
R 36/38	Irritating to eyes/skin
R 38	Irritating to skin
R 41	Risk of serious damage to eyes
R 43	May cause sensitization by skin contact
R 50/53	Very toxic to aquatic organisms, may cause long term adverse effects to them
R 51/53	Toxic to aquatic organisms, ,may cause long term adverse effects
R 53	May cause long term adverse effects in the aquatic environment
R 62	Possible risk of impaired fertility
N	Dangerous for the environment
Xi	Irritant
Xn	Harmful

Classification and procedure used to deliver the classification for mixtures according to regulation EC 1272/2008 (CLP)

Acute Tox 4 (Oral) as per H 302 Calculation method

STOT RE 2 as per H 373 Calculation method

Prepared as per to the 29 CFR 1910.1200 (2012) and EU by United Grease and Lubricants Co LLC, PO Box 2685, Ajman,United Arab Emirates. Meets EU No. 2015/830 regulations also