Antifreeze

Product Reference code:S95599870

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Revision date: 8/16/2023 Supersedes version of: 9/7/2020 Version: 2.02

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form	: Mixture
Name	: Antifreeze
Trade name	: Antifreeze Longlife
UFI	: Y8QR-XG5M-TV81-6GN9
Product code	: S95599870
Synonyms	: Kühlerfrostschutz / Antifreeze / Produit antigel radiateur
Product group	: Antifreezes

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Main use category	: Professional use,Consumer use
Use of the substance/mixture	: Use in automotive applications

1.2.2. Uses advised against

Restrictions on use	: Mixing table: please see annex.

1.3. Details of the supplier of the safety data sheet

Name	Opel Automobile GmbH
	Bahnhofsplatz 1
	D 65423 Rüsselsheim am Main
Fax	+49-6142/ 749-503
Inquiry office	
	IFZ Ingenieurbüro und Consulting GmbH
E-mail	OPEL-helpdesk@ifz-berlin.de
Telephone:	+49 30 / 2904897-10

1.4. Emergency telephone number

Emergency number	+49 61 31 19240 United Kingdom +44 870 600 626 / 0870 600 6266

Further information
Apply safety data sheet to the following products:

Part-No.	Catalogue-No.	amount
95599870	-	1 L
95599871*	-	5 L
95599873*	-	60 L Except GB+Ireland
95599874*	-	205 LExcept GB+Ireland
95599875	-	60 L For GB+Ireland
95599876	-	205 LFor GB+Ireland
95528437	-	5 L

* Production was stopped. Delivery now only from stocks.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute toxicity (oral), Category 4	H302

Specific target organ toxicity – Repeated exposure, Category 2 H373

Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

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

Hazard pictograms (CLP) :

GHS07 GHS08

Signal word (CLP) : Warning

Contains : ethanediol; ethylene glycol

Hazard statements (CLP) : H302 - Harmful if swallowed.
H373 - May cause damage to organs (kidneys) through prolonged or repeated exposure.

Precautionary statements (CLP) : P101 - If medical advice is needed, have product container or label at hand.
P102 - Keep out of reach of children.
P260 - Do not breathe dust/fume/gas/mist/vapours/spray.
P264 - Wash hands, forearms and face thoroughly after handling.
P301+P330+P331+P310 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER, a doctor.
P501 - Dispose of Contents and container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards

Other hazards which do not result in classification : At high temperatures, vapours can form in concentrations which can be hazardous to health.

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.
sodium molybdate dihydrate (7631-95-0)	Not required. (Inorganic compound)

The 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 identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0.1 %

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
ethanediol; ethylene glycol substance with national workplace exposure limit(s) (GB); substance with a Community workplace exposure limit	CAS-No.: 107-21-1 EC-No.: 203-473-3 EC Index-No.: 603-027-00-1 REACH-no: 01-2119456816-28	80 – 98	Acute Tox. 4 (Oral), H302 STOT RE 2, H373

Comments : Contains bitters
(Denatonium benzoate 25 ppm)

Full text of H- and EUH-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Show this safety data sheet to the doctor in attendance. If unconscious, place the person in the recovery position and seek medical advice immediately. Do not administer liquids to the unconscious person and avoid vomiting. Protection is needed for the First Aider. Use personal protective equipment. (Protective gloves, chemical-resistant; Safety glasses, respirator mask). Eye wash fountains and safety showers must be easily accessible.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Upon irritation of the respiratory tract or mucous membranes (e.g. coughing), indisposition or prolonged exposure, consult a doctor. Lay the affected person down, and keep her or him warm and calm. In case of irregular breathing or respiratory arrest: Oxygen or artificial respiration, if needed. Call a physician immediately.

First-aid measures after skin contact : After contact with skin, wash immediately with plenty of water and soap. Take off immediately all contaminated clothing and wash it before reuse. If skin irritation persists, call a physician.

First-aid measures after eye contact : Rinse immediately and thoroughly, pulling the eyelids well away from the eye (15 minutes minimum). Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, consult a specialist. A suitable eye shower is available in the working area.

First-aid measures after ingestion : If swallowed, seek medical advice immediately and show this container or label. Do not induce vomiting. If victim is conscious: Drink 1 or 2 glasses of water. Never give anything by mouth to an unconscious person. The same applies if the patient suffers cramps. If swallowed or in the event of vomiting, risk of product entering the lungs. In the event of spontaneous nausea and unconsciousness, keep the head back and bring the patient into the recovery position.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects : May cause: headache, nausea, weakness. More severe effects (shortness of breath, muscle twitching, unconsciousness, death) if excessive exposure.

Symptoms/effects after inhalation : Vapours may cause drowsiness and dizziness. Irritation of mucous membranes. Central nervous system disorders. Coordination and equilibrium disorders can occur. Disorientation, blurred vision, abdominal pain, muscle pain.

Symptoms/effects after skin contact : Repeated or prolonged exposure may cause skin irritation and dermatitis, due to degreasing properties of the product.

Symptoms/effects after eye contact : Temporary irritation of the eyes possible.

Symptoms/effects after ingestion : Effects due to ingestion may include: vomiting, diarrhoea, thirst. Excessive exposures may affect human health, as follows: liver and kidney damage. Swallowing can lead to lung oedema or pneumonia. Danger of blindness. Effects on following organs are reported: heart, lungs. May cause birth defects.

Chronic symptoms : Repeated excessive exposure can adversely affect an existing kidney disease.

4.3. Indication of any immediate medical attention and special treatment needed

Symptomatic treatment (decontamination and vital functions). Symptoms of poisoning may not appear for several hours. Keep under medical supervision for at least 48 hours. Victim to lie down in the recovery position, cover and keep him warm. After swallowing: Possible administration of ethanol. Ethylene glycol is metabolized to oxalic acid. Symptoms of poisoning can be delayed by administering ethanol (in the form of a 5% solution in a physiological salt solution, to maintain a blood level of 1 - 2 mg/ml). This treatment is only effective when it is begun within 6 hours after exposure. In the case of emergency the effect of the simultaneously administered dosis of ethandiol and ethanol must be checked according to each individual case. Call a physician or Poison Control Centre immediately.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Dry chemical powder, alcohol-resistant foam, carbon dioxide (CO2).

Unsuitable extinguishing media : Do not use a solid water stream as it may scatter and spread fire.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Heating can release hazardous gases. The inhalation of hazardous decomposition products may cause serious health damage.

Hazardous decomposition products in case of fire : Thermal decomposition generates : fume, Carbon dioxide, organic compounds (low molecular weight).

5.3. Advice for firefighters

Firefighting instructions	: Use extinguishing measures that are appropriate to the environment. Prevent further leakage or spillage if safe to do so. Remove intact containers immediately from the dangerous area and/or cool them with water. Use water spray or fog for cooling exposed containers. Prevent fire fighting water from entering the environment.
Protection during firefighting	: Do not breathe in the vapours and combustion gases. In the event of fire, wear self-contained breathing apparatus. Complete protection suit and compressed air breathing apparatus. Clothing for firefighters which comply with the European norm EN 469 (including helmet, protective boots, protective gloves) provide a basic protection for accident with chemicals. Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant fire fighting clothing with self-contained breathing apparatus.
Other information	: Collect contaminated fire fighting water separately. Contaminated extinguishing water and soil must be disposed of in accordance with official regulations.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Evacuate personnel to a safe area. Keep people away from and upwind of spill/leak. Remove all sources of ignition. Ensure adequate ventilation, especially in confined areas. Do not breathe in vapours and mist. When handling the product, follow hygiene and safety precautions. Wear personal protective equipment. Large quantities: Self-contained breathing apparatus. Keep unprotected people away.

6.1.1. For non-emergency personnel

No additional information available

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

Prevent further leakage or spillage if safe to do so. Contain the product immediately by taking suitable action. Damp down released vapours with water spray. Do not allow material to contaminate ground water system. Do not flush into surface water or sanitary sewer system. Contact the responsible authority immediately if the product ends up in the soil, a body of water, or the sewer system.

6.3. Methods and material for containment and cleaning up

For containment	: Seal discharge point, if possible without danger. Small amounts: Wipe up with absorbent material (e.g. cloth, fleece). Large quantities: Spilled or leaking material is to be soaked up with non-flammable absorbent materials (sand, soil, diatomaceous earth) and put in containers. Dispose of the material collected according to regulations.
Methods for cleaning up	: Clean contaminated surface thoroughly. Flush with water. Recover the cleaning water for subsequent disposal.
Other information	: Never return spills in original containers for reuse. Even small quantities must be disposed of as per regulations. Dispose of rinse water in accordance with local and national regulations.

6.4. Reference to other sections

Suitable protective equipment. See section 8. Dispose of as described in section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed	: Keep product and empty container away from heat and sources of ignition. Emtied containers can contain residues of product. Do not burn, or use a cutting torch on the empty drum. Empty containers must be completely drained to the state of the art before being disposed of. Keep in suitable, closed containers for disposal. See section: 13.
Precautions for safe handling	: Provide adequate ventilation and/or exaust ventilation. Do not breathe in vapours and mist. Keep away from heat. Articles impregnated with the product are to be disposed of immediately (cloth, paper, absorbent material). Avoid contact with skin, eyes and clothing. Do not ingest. When handling the product, follow hygiene and safety precautions. Avoid emptying into the drains. Do not contaminate water. Take notice of the directions of use on the label.
Hygiene measures	: A high standard of personal hygiene is required. When using, do not eat, drink, or smoke. Wash hands before breaks and immediately after handling the product. Apply lotion to hands afterwards. Wash contaminated skin areas thoroughly with soap and water. Remove and wash contaminated clothing before re-use. Women of child-bearing age should avoid contact with the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures	: Facilities must be planned in such a way that contamination of the soil and groundwater is excluded.
Storage conditions	: Store in compliance with the local regulations. Store in original container. Keep tightly closed in a dry, cool and well-ventilated place. Protect from heat and direct sunlight. Avoid contamination with incompatible materials. See also section 10. The product may only come into contact with suitable materials.
Maximum storage period	: 36 months
Information on mixed storage	: Store separately from: strong oxidising agents, strong acids. Keep away from food and drink.
Storage area	: Handle, store and transport in compliance with local regulations and in labelled containers that are suitable for this product.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

ethanediol; ethylene glycol (107-21-1)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Ethylene glycol
IOEL TWA	52 mg/m³
IOEL TWA [ppm]	20 ppm
IOEL STEL	104 mg/m³
IOEL STEL [ppm]	40 ppm
Remark	Skin
Regulatory reference	COMMISSION DIRECTIVE 2000/39/EC
United Kingdom - Occupational Exposure Limits	
Local name	Ethane-1,2-diol
WEL TWA (OEL TWA) [1]	10 mg/m³ particulate 52 mg/m³ vapour
WEL TWA (OEL TWA) [2]	20 ppm vapour
WEL STEL (OEL STEL)	104 mg/m³ vapour
WEL STEL (OEL STEL) [ppm]	40 ppm vapour
Remark	Sk (Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity)
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

Appropriate engineering controls:

Provide sufficient air exchange and/or exhaust in work rooms. Provide a good standard of controlled ventilation (10 to 15 air changes per hour). If necessary: Local exhaust. Follow the maximum workplace concentration values. Wear appropriate breathing apparatus if air renewal not sufficient to maintain dust/vapour under TLV. Electrical systems and equipment must comply with the regulations.

Personal protective equipment:

Personal protection equipment should comply with the relevant standards, be suitable for purpose, in good condition and maintained as specified.

Hand protection:

Protective gloves. Use tested protective gloves. (chemical-resistant). Suitable materials even for lengthy direct contact (recommended: pursuant to safety index 6 >480 minutes permeation time pursuant to EN 374): neoprene/viton®, Butyl rubber, nitrile rubber. Layer thickness: 0.38 mm. Safety gloves should be selected for the actual conditions of use and in accordance with the instructions for use provided by the manufacturer. Please note that the daily use of a chemical glove in practice may be considerably shorter than the permeation time calculated in EN 374 as a result of many different factors (for example temperature). Protective gloves should be replaced immediately if damaged or in case of signs of wear. Preventive skin protection by skin protection cream. Protection cream can help to protect the skin surface. It should be applied before use.

Eye protection:

Wear security glasses which protect from splashes. Safety glasses with side-shields/Face shield (EN 166).

Skin and body protection:

After use: Wash contaminated skin areas thoroughly with soap and water. In the case of long or repeated exposure, use protective clothing. Chemical resistant apron. If necessary: Heatproof clothing

Respiratory protection:

Only use in well-ventilated areas. Breathing protection in the event of aerosol, mist or vapour formation. When the concentration in the air is over the maximum occupational exposure limit, an approved respiratory protection apparatus must be worn. Breathing apparatus with filter. Wear a mask for organic vapours. (EN 14387). Full face mask. If necessary: Self-contained breathing apparatus, preferably a compressed airline breathing apparatus

Personal protective equipment symbol(s):

Environmental exposure controls:

Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Avoid subsoil penetration.

Consumer exposure controls:

Women of child-bearing age should avoid contact with the product. (Specific medical surveillance).

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Blue-green.
Odour	: weakly.
Odour threshold	: Not available
Melting point	: Not available
Freezing point	: -18 °C (Typical for the product.)
Boiling point	: 180 °C (estimated)
Flammability	: Not available
Explosive properties	: The product is not explosive.
Oxidising properties	: None.
Explosive limits	: Not available
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: ≈ 122 °C (closed cup)
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: 8.28 at 20 °C (Typical for the product.)

Viscosity, kinematic	: Not available
Solubility	: Water: Miscible
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50°C	: Not available
Density	: 1.134 g/cm³ at 20 °C, (Typical for the product.)
Relative density	: Not available
Relative vapour density at 20°C	: Not available
Particle size	: Not applicable
Particle size distribution	: Not applicable
Particle shape	: Not applicable
Particle aspect ratio	: Not applicable
Particle aggregation state	: Not applicable
Particle agglomeration state	: Not applicable
Particle specific surface area	: Not applicable
Particle dustiness	: Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions of use.

10.3. Possibility of hazardous reactions

No dangerous reactions are known under conditions of normal use.

10.4. Conditions to avoid

Heating can release hazardous gases. Keep away from heat and sources of ignition. Avoid contamination with incompatible materials.

10.5. Incompatible materials

Incompatible with strong acids and strong oxidising agents. chlorates, nitrates, peroxides.

10.6. Hazardous decomposition products

Ethylene glycol decomposes at 165 °C and releases among others glycolaldehyde, glyoxal, acetaldehyd, methan, formaldehyde, carbon monoxide and hydrogen.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral)	: Harmful if swallowed.
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

Antifreeze Longlife	
ATE CLP (oral)	510.256 mg/kg bodyweight

ethanediol; ethylene glycol (107-21-1)	
LD50 oral rat	7712 mg/kg bodyweight (male/female)
LD50 dermal	> 3500 mg/kg (mouse/male/female)
LC50 Inhalation - Rat	> 2.5 mg/l (6h)
ATE CLP (oral)	500 mg/kg bodyweight

Skin corrosion/irritation	: Not classified pH: 8.28 at 20 °C (Typical for the product.)
Serious eye damage/irritation	: Not classified pH: 8.28 at 20 °C (Typical for the product.)

Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified

ethanediol; ethylene glycol (107-21-1)	
NOAEL (chronic, oral, animal/male, 2 years)	1500 mg/kg bodyweight (mouse/male)

Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: May cause damage to organs (kidneys) through prolonged or repeated exposure.

ethanediol; ethylene glycol (107-21-1)	
STOT-repeated exposure	May cause damage to organs (kidneys) through prolonged or repeated exposure.

Aspiration hazard	: Not classified

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

No additional information available

11.2.2. Other information

Potential adverse human health effects and symptoms	: Swallowing can lead to lung oedema or pneumonia. Ethanediol (CAS 107-21-1): May impair fertility and cause harm to the unborn child. Effects on following organs are reported: heart, lungs. Liver and kidney damage may occur. Danger of blindness. Danger of metabolic acidosis. Inhalation of high vapour concentrations can cause CNS-depression and narcosis. Symptoms include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. LDlo (oral, human): approx. 100 ml. (Deadly dose)
Toxicokinetics, metabolism and distribution	: Ethylene glycol is metabolized to oxalic acid.
Experience with humans	: Inhalation of vapours in high concentration may cause irritation of respiratory tract. (cough). Concentration above the admissible concentration at the workplace may cause dizziness, headache and inebriation. Direct contact with the eyes is likely to be irritating. Drying out of the skin due to defatting. Repeated or prolonged exposure may cause skin irritation and dermatitis, due to degreasing properties of the product.
Other information	: Chronic (long-term) health effects may result from repeated overexposure

SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short–term (acute)	: Not classified
Hazardous to the aquatic environment, long–term (chronic)	: Not classified

ethanediol; ethylene glycol (107-21-1)	
LC50 - Fish [1]	72860 mg/l Pimephales promelas - (EPA 600/4-90/027)
EC50 - Crustacea [1]	> 100 mg/l Daphnia magna (Water flea) - (OECD 202 method)
EC50 72h - Algae [1]	> 100 mg/l Raphidocelis subcapitata - (OECD 201 method)
EC50 96h - Algae [1]	3536 mg/l Raphidocelis subcapitata - (Quantitative structure-activity relationship (QSAR)
EC50 96h - Algae [2]	6500 – 13000 mg/l Raphidocelis subcapitata - (EPA 600/9-78-018)
NOEC (chronic)	≥ 1000 mg/l (23 d) - Americamysis bahia - (ASTM E-47.01/2)
NOEC chronic algae	> 100 mg/l Raphidocelis subcapitata - (OECD 201 method)

12.2. Persistence and degradability

ethanediol; ethylene glycol (107-21-1)	
Persistence and degradability	Highly biodegradable.
Biodegradation	83 – 90 % (28 d) - (OECD 301A method)/(OECD 301C method)

12.3. Bioaccumulative potential

ethanediol; ethylene glycol (107-21-1)	
Partition coefficient n-octanol/water (Log Pow)	-1.36 (Quantitative structure-activity relationship (QSAR))

ethanediol; ethylene glycol (107-21-1)	
Bioaccumulative potential	Bioaccumulation is not expected to occur.

12.4. Mobility in soil

ethanediol; ethylene glycol (107-21-1)	
Ecology - soil	Adsorption/Desorption: not expected. (The substance will not evaporate into the atmosphere from the water surface. Predicted distribution to environmental compartments : water).

12.5. Results of PBT and vPvB assessment

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.
sodium molybdate dihydrate (7631-95-0)	Not required. (Inorganic compound)

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

Other adverse effects : No additional information available

Additional information : Do not allow material to contaminate ground water system. Do not flush into surface water or sanitary sewer system.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste) : The generation of waste should be avoided or minimized wherever possible. 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.

Product/Packaging disposal recommendations : Disposal in accordance with the official regulations. Where possible recycling is preferred to disposal or incineration. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact waste disposal services. The containers must be sealed, marked and disposed of safely. Do not flush into surface water or sanitary sewer system. Packaging can be sent for recycling after being emptied and cleaned. Emtied containers can contain residues of product. Empty containers can contain flammable and explosive vapours. See also section 7. Do not use unlabelled containers. Notes on reconditioning: The latest product label must remain on the packaging until the container has been reconditioned.

Additional information : Waste code numbers are a recommendation, since the intended use by the consumer allows a final assignment.

European List of Waste (LoW) code : 16 01 14* - antifreeze fluids containing dangerous substances
15 01 10* - packaging containing residues of or contaminated by dangerous substances

SECTION 14: Transport information

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

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
not regulated	not regulated	not restricted	not regulated	not regulated
14.2. UN proper shipping name				
not regulated	not regulated	not restricted	not regulated	not regulated
14.3. Transport hazard class(es)				
not regulated	not regulated	not restricted	not regulated	not regulated
14.4. Packing group				
	-			
14.5. Environmental hazards				
Dangerous for the environment : No	Dangerous for the environment : No Marine pollutant : No	Dangerous for the environment : No	Dangerous for the environment : No	Dangerous for the environment : No
No supplementary information available				

14.6. Special precautions for user

Overland transport

No data available

Transport by sea

No data available

Air transport

No data available

Inland waterway transport

No data available

Rail transport

No data available

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

EU restriction list (REACH Annex XVII)		
Reference code	**Applicable on**	**Entry title or description**
3(b)	Antifreeze Longlife ; ethanediol; ethylene glycol	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I 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

Contains no substance(s) listed on the REACH Candidate List

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

VOC content : 0.3 % (VOC Directive 2004/42/EC)

Other information, restriction and prohibition regulations : Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Directive 2012/18/EU (SEVESO III)

Seveso Additional information : Not subject to 2012/18/EU (SEVESO III)

15.1.2. National regulations

The national regulations have to be complied with as necessary.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out for the substance or the mixture by the supplier.

SECTION 16: Other information

Indication of changes:

All chapters have been modified since the previous version.

Abbreviations and acronyms:

ATE = Acute Toxicity Estimate
DNEL = Derived No Effect Level
PNEC = Predicted No-Effect Concentration
NOEL = No Observed Effect Level
NOEC = No-Observed-Effect-Concentration
NOAEL = No Observed Adverse Effect Level
LOAEL = Lowest Observed Adverse Effect Level
SADT = Self-Accelerating decomposition temperature
SVHC = substance of very high concern
VOC = Volatile organic compounds
IUCLID = International Uniform Chemical Information Database
OECD = Organization for Economic Co-operation and Development
RTECS = Registry of Toxic Effects of Chemical Substances
RTECS = Registry of Toxic Effects of Chemical Substances
REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
CLP = Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
EINECS = European Inventory of Existing Commercial Chemical Substances

Full text of H- and EUH-statements:	
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
H302	Harmful if swallowed.
H373	May cause damage to organs through prolonged or repeated exposure.
STOT RE 2	Specific target organ toxicity – Repeated exposure, Category 2

The classification complies with : ATP 12

Other information :

The information is based on present levels of our knowledge. It does not, however, give assurances of product properties and establishes no contract legal rights. The product is to be used exclusively for the applications named in the technical data sheet or in the processing instructions. Existing laws and regulations are the responsibility of the recipient of our products. The data of the hazardous ingredients were taken from the last relevant safety data sheet of the subcontractor.

MIXING TABLE

Long Life antifreeze

Cooling System Capacity in litres	Mixing table for a Freezing point (according ASTM D1177) up to						
	-10°C	-15°C	-20°C	-25°C	-30°C	-35°C	-40°C
	Dosage of Long Life antifreeze in litres :						
5	1.1	1.5	1.8	2.0	2.2	2.4	2.6
6	1.3	1.8	2.1	2.4	2.7	2.9	3.1
7	1.5	2.0	2.5	2.8	3.1	3.4	3.6
8	1.7	2.3	2.8	3.2	3.6	3.9	4.1
9	1.9	2.6	3.2	3.6	4.0	4.3	4.7
10	2.2	2.9	3.5	4.0	4.5	4.8	5.2
11	2.4	3.2	3.9	4.4	4.9	5.3	5.7
12	2.6	3.5	4.2	4.8	5.3	5.8	6.2
13	2.8	3.8	4.6	5.2	5.8	6.3	6.7
14	3.0	4.1	4.9	5.6	6.2	6.8	7.2
15	3.2	4.4	5.3	6.0	6.7	7.2	7.8
16	3.5	4.7	5.6	6.4	7.1	7.7	8.3
17	3.7	5.0	6.0	6.9	7.6	8.2	8.8
18	3.9	5.3	6.3	7.3	8.0	8.7	9.3
19	4.1	5.5	6.7	7.7	8.5	9.2	9.8
20	4.3	5.8	7.0	8.1	8.9	9.7	10.3
Dosage in Vol.%	21.6 Vol.%	29.2 Vol.%	35.2 Vol.%	40.3 Vol.%	44.6 Vol.%	48.3 Vol.%	51.7 Vol.%

Important note : For dilutions with less than 33 vol.%Long Life antifreeze, this means a freezing point of -20°C, the anti-corrosion protection is no longer guaranteed.

When the capacity of the Cooling System is bigger than 20 litres, then the dosage of Long Life antifreeze can be calculated by adding up the volumes at the respective capacities.
Example : Desired Freezing Point -25°C, capacity of the cooling system is 28 litres.

Part 1	"20 litres"	gives 8.1 litres Long Life antifreeze
Part 2	"8 litres"	gives 3.2 litres Long Life antifreeze
	28 litres :	8.1+3.2 = 11.3 litres Long Life antifreeze for a freezing point up to -25°C.