



Antifreeze Longlife G12 Red

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830
Date of issue: 08/01/2015 Revision date: 09/10/2018 Supersedes: 14/09/2015 Version: 2.2

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

1.1. Product identifier

Product form : Mixture
Product name : Antifreeze Longlife G12 Red
Product code : 832
Article number : 83200

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

1.2.1. Relevant identified uses

Main use category : Antifreeze.
Function or use category : Antifreeze/Coolant

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

BARDAHL NL - OCD NEDERLAND BV
Maxwellstraat 41
3316 GP Dordrecht - Nederland
T 0031 78 651 2322 - F 0031 78 617 4848
rjjonker@bardahl.nl - www.bardahl.nl

1.4. Emergency telephone number

Emergency number : +31 (0) 6 2908 2010
During office hours: 8.30 t/m 17:00 h

Country	Official advisory body	Address	Emergency number	Comment
	Guy's & St Thomas' Poisons Unit Medical Toxicology Unit, Guy's & St Thomas' Hospital Trust	Avonley Road SE14 5ER London	0870 243 2241	
United Kingdom	National Poisons Information Service (Birmingham Centre) City Hospital	Dudley Road B18 7QH Birmingham	0344 892 0111	
United Kingdom	National Poisons Information Service (Belfast Centre) Royal Victoria Hospital	Grosvenor Road BT12 6BA Belfast	0344 892 0111	

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP] Mixtures/Substances: SDS EU 2015: According to Regulation (EU) 2015/830 (REACH Annex II)

Acute toxicity (oral), Category 4 H302
Reproductive toxicity, Category 2 H361
Specific target organ toxicity — Repeated exposure, Category 2 H373
Full text of H 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

Hazardous ingredients :

1,2-ethanediol; Sodium 2-ethylhexanoate

Hazard statements (CLP) :

H302 - Harmful if swallowed.
H361 - Suspected of damaging fertility or the unborn child.
H373 - May cause damage to organs through prolonged or repeated exposure.

Antifreeze Longlife G12 Red

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Precautionary statements (CLP) : P501 - Dispose of contents/container in accordance with local regulations.
P405 - Store locked up.
P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER, a doctor.
P280 - Wear protective gloves, protective clothing, face protection, eye protection.
P260 - Do not breathe vapours, spray, mist, gas, fume, dust.

2.3. Other hazards

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

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]
1,2-ethanediol	(CAS-No.) 107-21-1 (EC-No.) 203-473-3 (EC Index-No.) 603-027-00-1 (REACH-no) 01-2119456816-28	60 - 98	Acute Tox. 4 (Oral), H302 STOT RE 2, H373
Sodium 2-ethylhexanoate	(CAS-No.) 19766-89-3 (EC-No.) 243-283-8 (EC Index-No.) 01-2119979083-31	3 - 5	Repr. 2, H361d
sodium nitrite	(CAS-No.) 7632-00-0 (EC-No.) 231-555-9 (EC Index-No.) 007-010-00-4 (REACH-no) 01-2119471836-27	< 1	Ox. Sol. 3, H272 Acute Tox. 3 (Oral), H301 Aquatic Acute 1, H400

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : Assure fresh air breathing. Get medical advice/attention if you feel unwell.
First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. Wash contaminated clothing before reuse.
First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
First-aid measures after ingestion : Obtain emergency medical attention. Do not induce vomiting. Never give anything by mouth to an unconscious person.

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

Symptoms/effects : Damage of the kidneys can occur.
Symptoms/effects after inhalation : Not expected to be harmful if inhaled. High concentrations may cause headache, dizziness, nausea, dullness and other effects on the central nervous system that lead to vision impairment, respiratory disorders and convulsions. At extreme exposures, central nervous system effects may include respiratory depression, tremors or convulsions, loss of consciousness, coma or death.
Symptoms/effects after skin contact : Contact with the skin is not expected to be harmful.
Symptoms/effects after eye contact : Not expected to cause prolonged or significant eye irritation.
Symptoms/effects after ingestion : May be harmful if swallowed and enters airways.

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

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Dry chemical. Carbon dioxide. Alcohol resistant foam.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Carbon monoxide. Carbon dioxide. Not unidentified organic compounds.

5.3. Advice for firefighters

Other information : This material will burn, although it is not easily ignited. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus.

Antifreeze Longlife G12 Red

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Eliminate every possible source of ignition.

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

Clean up even minor leaks or spills, if possible, without unnecessary risk.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Clean up any spills as soon as possible, using an absorbent material to collect it. Dispose in a safe manner in accordance with local/national regulations.

6.4. Reference to other sections

See Heading 8. See Heading 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Keep out of reach of children.

Precautions for safe handling : Do NOT taste or swallow. Do not breathe gas, fumes, vapour or spray. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Prevent entry to sewers and public waters. Use special care to avoid static electric charges. Never pressurise packagings as they will not resist.

Incompatible materials : heat. Open flame. Sources of ignition. Avoid static electricity discharges.

7.3. Specific end use(s)

Antifreeze/Coolant.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

1,2-ethanediol (107-21-1)

EU	Local name	Ethylene glycol
EU	IOELV TWA (mg/m ³)	52 mg/m ³
EU	IOELV TWA (ppm)	20 ppm
EU	IOELV STEL (mg/m ³)	104 mg/m ³
EU	IOELV STEL (ppm)	40 ppm
EU	Notes	Skin

1,2-ethanediol (107-21-1)

DNEL/DMEL (Workers)

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

DNEL/DMEL (General population)

Long-term - systemic effects, inhalation	7 mg/m ³
Long-term - systemic effects, dermal	53 mg/kg bodyweight/day
Long-term - local effects, inhalation	7 mg/m ³

PNEC (Water)

PNEC aqua (freshwater)	10 mg/l
PNEC aqua (marine water)	1 mg/l
PNEC aqua (intermittent, freshwater)	10 mg/l

PNEC (Sediment)

PNEC sediment (freshwater)	20.9 mg/kg dwt
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Antifreeze Longlife G12 Red

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

1,2-ethanediol (107-21-1)	
PNEC (Soil)	
PNEC soil	1.53 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	199.5 mg/l
Sodium 2-ethylhexanoate (19766-89-3)	
PNEC (Water)	
PNEC aqua (freshwater)	0.36 mg/l
PNEC aqua (marine water)	0.036 mg/l
PNEC aqua (intermittent, freshwater)	0.493 mg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	0.301 mg/kg dwt
PNEC sediment (marine water)	0.0301 mg/kg dwt
PNEC (Soil)	
PNEC soil	0.0579 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	71.7 mg/l

Additional information : SDS section 2.1.2 - Additional text

8.2. Exposure controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

Hand protection:

neoprene/natural rubber. Gloves material: Nitrile. Polyvinylchloride (PVC)

Eye protection:

No special eye protection equipment recommended under normal conditions of use. Eye protection should only be necessary where liquid could be splashed or sprayed

Skin and body protection:

No special clothing/skin protection equipment is recommended under normal conditions of use. If repeated skin contact or contamination of clothing is likely, protective clothing should be worn.

Respiratory protection:

No special protection required where adequate ventilation is maintained. If excessive exposure exist, use only approved air-purifying or supplied air respirator operated in a positive pressure mode.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: red.
Odour	: mild.
Odour threshold	: No data available
pH	: 7 - 9
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: -18 °C (-0.4 °F)
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available

Antifreeze Longlife G12 Red

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 1.1 kg/l (20°C) (68°F) (Typical)
Solubility	: Soluble in water.
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Strong oxidisers. Strong acids. Chlorates. Nitrates. Peroxides.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

No additional information available

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Aldehydes. ketones.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified as dangerous according to the criteria of Regulation (EC) No 1272/2008
Acute toxicity (dermal)	: Not classified as dangerous according to the criteria of Regulation (EC) No 1272/2008
Acute toxicity (inhalation)	: Not classified as dangerous according to the criteria of Regulation (EC) No 1272/2008

ATE CLP (oral)	500 mg/kg bodyweight
Additional information	<p>This product contains ethylene glycol (EG). The toxicity of EG through inhalation or skin contact is expected to be slight at room temperature. The estimated oral lethal dose is about 100 cc (3.3 oz.) for an adult human. Ethylene glycol is oxidized to oxalic acid which results in the deposition of calcium oxalate crystals mainly in the brain and kidneys. Early signs and symptoms of EG poisoning may resemble those of alcohol intoxication. Later, the victim may experience nausea, vomiting, weakness, abdominal and muscle pain, difficulty in breathing and decreased urine output. When EG was heated above the boiling point of water, vapour formed which reportedly caused unconsciousness, increased lymphocyte count, and a rapid, jerky movement of the eyes in persons chronically exposed. When EG was administered orally to pregnant rats and mice, there was an increase in fatal deaths and birth defects. Some of these effects occurred at doses that had no toxic effects on the mothers.</p> <p>We are not aware of any reports that EG causes reproductive toxicity in human beings.. 2-Ethylhexanoic acid (2-EXA) caused an increase in liver size and enzyme levels when repeatedly administered to rats through the diet. When administered to pregnant rats by gavage or in drinking water, 2-EXA caused teratogenic (birth defects) and delayed postnatal development of the pups. Additionally, 2-EXA impaired female fertility in rats. Birth defects were seen in the offspring of mice who were administered sodium 2-ethylhexanoate through intraperitonele injection during pregnancy.</p>

1,2-ethanediol (107-21-1)

LD50 oral rat	7712 mg/kg
LD50 dermal rabbit	9530 mg/kg
LC50 inhalation rat (mg/l)	> 2.5 mg/l

Sodium 2-ethylhexanoate (19766-89-3)

LD50 oral rat	> 2000 mg/kg
LD50 dermal rat	> 2000 mg/kg

Antifreeze Longlife G12 Red

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

LC50 inhalation rat (mg/l)	0.11 mg/l
Skin corrosion/irritation	: Not classified as dangerous according to the criteria of Regulation (EC) No 1272/2008 pH: 7 - 9
Serious eye damage/irritation	: Not classified as dangerous according to the criteria of Regulation (EC) No 1272/2008 pH: 7 - 9
Respiratory or skin sensitisation	: Not classified as dangerous according to the criteria of Regulation (EC) No 1272/2008
Germ cell mutagenicity	: Not classified as dangerous according to the criteria of Regulation (EC) No 1272/2008
Carcinogenicity	: Not classified as dangerous according to the criteria of Regulation (EC) No 1272/2008

1,2-ethanediol (107-21-1)

NOAEL (chronic, oral, animal/male, 2 years)	1000 mg/kg bodyweight
NOAEL (chronic, oral, animal/female, 2 years)	1000 mg/kg bodyweight

Reproductive toxicity : Not classified as dangerous according to the criteria of Regulation (EC) No 1272/2008
STOT-single exposure : Not classified as dangerous according to the criteria of Regulation (EC) No 1272/2008

1,2-ethanediol (107-21-1)

NOAEL (oral, rat)	200 mg/kg bodyweight
NOAEL (acute, oral, animal/female)	1000 mg/kg bodyweight

STOT-repeated exposure : May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard : Not classified as dangerous according to the criteria of Regulation (EC) No 1272/2008

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Ecological problems are not known or expected under normal use. Not tested.
Acute aquatic toxicity : Not classified as dangerous according to the criteria of Regulation (EC) No 1272/2008
Chronic aquatic toxicity : Not classified as dangerous according to the criteria of Regulation (EC) No 1272/2008

1,2-ethanediol (107-21-1)

LC50 fish 1	72860 mg/l
EC50 Daphnia 1	> 100 mg/l (24h)
EC50 other aquatic organisms 1	6500 - 13000 mg/l (Algen)
NOEC chronic fish	15380 mg/l
NOEC chronic algae	8590 mg/l

Sodium 2-ethylhexanoate (19766-89-3)

LC50 fish 1	> 100 mg/l
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12.2. Persistence and degradability

Antifreeze Longlife G12 Red

Persistence and degradability	This material is expected to be readily biodegradable. Not tested.
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1,2-ethanediol (107-21-1)

Persistence and degradability	Readily biodegradable.
Biodegradation	90 % (OECD 301D method)

Sodium 2-ethylhexanoate (19766-89-3)

Persistence and degradability	Readily biodegradable.
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12.3. Bioaccumulative potential

1,2-ethanediol (107-21-1)

Log Kow	-1.36
Bioaccumulative potential	No.

Antifreeze Longlife G12 Red

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

12.4. Mobility in soil

1,2-ethanediol (107-21-1)

Ecology - soil	High. Mobility in soil.
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Sodium 2-ethylhexanoate (19766-89-3)

Ecology - soil	Material highly soluble in water.
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12.5. Results of PBT and vPvB assessment

Antifreeze Longlife G12 Red

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

Component

1,2-ethanediol (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 2-ethylhexanoate (19766-89-3)	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

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

European List of Waste (LoW) code : 16 01 14* - antifreeze fluids containing dangerous substances

SECTION 14: Transport information

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

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.2. UN proper shipping name				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.3. Transport hazard class(es)				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.4. Packing group				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
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. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

Antifreeze Longlife G12 Red

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions
Contains no substance on the REACH candidate list
Contains no REACH Annex XIV substances
Directive 2012/18/EU (SEVESO III)

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No

SECTION 16: Other information

Indication of changes:

Section	Changed item	Change	Comments
1.2	Function or use category	Added	
2.2	Precautionary statements (CLP)	Modified	
15.2	Chemical safety assessment	Modified	

Abbreviations and acronyms:

Abbreviations and acronyms:

RID: Regulations Concerning the International Transport of Dangerous Goods by Rail
ICAO: International Civil Aviation Organization
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent

Full text of H- and EUH-statements:

Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Ox. Sol. 3	Oxidising Solids, Category 3
Repr. 2	Reproductive toxicity, Category 2
STOT RE 2	Specific target organ toxicity — Repeated exposure, Category 2
H272	May intensify fire; oxidiser.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H361	Suspected of damaging fertility or the unborn child.
H361d	Suspected of damaging the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.

SDS EU (REACH Annex II)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product