

GLACIER ANTIFREEZE G13

Concentrated Fluid

GLACIER ANTIFREEZE G13 is a long life silicate containing antifreeze based on Organic Acid Technology (OAT) in ethylene glycol to be used as a cooling and heat transferring fluid in the latest generation VAG, MB and MAN combustion engines.

GLACIER ANTIFREEZE G13 is recommended to use, for good corrosion protection, at at least 33 vol. %, in the coolant solution. Mixtures with more than 70 vol.% of **GLACIER ANTIFREEZE G13** in water are not recommended. The maximum frost protection (about -69°C) is obtained at a mixture of 68 vol%.

GLACIER ANTIFREEZE G13 may not be used undiluted in a combustion engine.

GLACIER ANTIFREEZE G13 is based on ethylene glycol and a lobrid additive technology to obtain the following properties.

- Extended life.
- Environmentally friendly due to the absence of borate, nitrite, amines and phosphates
- Reliability
- Excellent corrosion protection for aluminium heat transfer surfaces.
- Excellent cavitation protection.

GLACIER ANTIFREEZE G13 meets the following performance criteria:

VW TL 774J

MB 325.5

MAN 324 Si-OAT

Typical Analysis

Properties	Unit	Method	Typical Value
Colour			Light Red/ Violet
Density @15°C	kg/m ³	ASTM D5931	1.135
Refractive Index, 20°C		ASTM D1218	1.437
Equilibrium Boiling Point	°C	ASTM D1120	>170
Reserve Alkalinity (pH 5.5)		ASTM D1121	5.7
pH Value		ASTM D1287	8.6
Freezing Protection			
35.6% dilution with water	°C		-20
41.0% dilution with water	°C		-25
49.8% dilution with water	°C		-35
Date Issued: 10-6-2021	Supersedes: 30-03-2018	Revision Nr.: 01	



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

1.1. Product identifier

Product form : Mixture
 Product name : 75010 - GLACIER ANTIFREEZE G13
 Product code : 75010

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

1.2.1. Relevant identified uses

No additional information available

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

North Sea Lubricants B.V. B.V.
 Ampèrestraat 5
 NL- 3846AN Harderwijk
 The Netherlands
 T +31 651345369
support@northsealubricants.com - www.northsealubricants.com

1.4. Emergency telephone number

Emergency number : +31 (0)786527652
 Monday to Friday: 09:00 - 16:00 (CET)

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
 Reproductive toxicity, Category 2 H361
 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

May cause damage to organs (kidneys) through prolonged or repeated exposure (if swallowed). Harmful if swallowed.

2.2. Label elements

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

Hazard pictograms (CLP) :



GHS07

GHS08

Signal word (CLP) : Warning
 Contains : ethylene glycol, 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 (kidneys) through prolonged or repeated exposure (if swallowed).
 Precautionary statements (CLP) : P201 - Obtain special instructions before use.
 P202 - Do not handle until all safety precautions have been read and understood.
 P260 - Do not breathe dust, fume, gas, mist, spray, vapours.

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P264 - Wash in contact with skin thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P280 - Wear protective gloves, protective clothing, eye protection, face protection.

2.3. Other hazards

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

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]
ethylene glycol substance with national workplace exposure limit(s) (FR, GB, NL); 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	≥ 75	Acute Tox. 4 (Oral), H302
Sodium-2-ethylhexanoate	CAS-No.: 19766-89-3 EC-No.: 243-283-8 REACH-no: 01-2119979083-31	2.5 – 5	Repr. 2, H361d

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 : IF exposed or concerned: Get medical advice/attention. Call a poison center or a doctor if you feel unwell. Get medical advice/attention if you feel unwell.
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact : Wash skin with plenty of water.
First-aid measures after eye contact : Rinse eyes with water as a precaution.
First-aid measures after ingestion : Rinse mouth. Call a poison center or a doctor if you feel unwell.

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

No additional information available

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

Treat symptomatically.

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 water jet since it may cause the fire to spread.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Toxic fumes may be released.

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5.3. Advice for firefighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. Do not breathe dust, fume, gas, mist, spray, vapours.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear personal protective equipment. Do not breathe dust, fume, gas, mist, spray, vapours.

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store locked up. Store in a well-ventilated place. Keep cool.

7.3. Specific end use(s)

Antifreeze.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

ethylene glycol (107-21-1)

EU - Indicative Occupational Exposure Limit (IOEL)

Local name	Ethylene glycol
IOEL TWA	52 mg/m ³
IOEL TWA [ppm]	20 ppm
IOEL STEL	104 mg/m ³

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ethylene glycol (107-21-1)	
IOEL STEL [ppm]	40 ppm
Remark	Skin
Regulatory reference	COMMISSION DIRECTIVE 2000/39/EC

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

8.2.1. Appropriate engineering controls

No additional information available

8.2.2. Personal protection equipment

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

No additional information available

8.2.2.2. Skin protection

Hand protection					
Type	Material	Permeation	Thickness (mm)	Penetration	Standard
	Nitrile rubber (NBR), Neoprene rubber (HNBR)	5 (> 240 minutes)	0.7	3 (> 0.65)	EN ISO 374
	Polyvinylchloride (PVC)	2 (> 30 minutes)	0.4	3 (> 0.65)	EN ISO 374

8.2.2.3. Respiratory protection

No additional information available

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: light red.
Odour	: slight.
Odour threshold	: Not available
Melting point	: Not applicable

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Freezing point	: -18 °C
Boiling point	: ≥ 170 °C
Flammability	: Not applicable
Explosive limits	: Not available
Lower explosive limit (LEL)	: Not available
Upper explosive limit (UEL)	: Not available
Flash point	: 122 °C
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: 8.4 – 8.55 20°C
Viscosity, kinematic	: Not available
Solubility	: Soluble in water.
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50 °C	: Not available
Density	: 1.132 kg/m ³ @20°C
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.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

Strong acids. Strong oxidizing agents. Nitrates. Peroxides. Chlorates.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

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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

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LD50 oral (rat)	1720 mg/kg

ethylene glycol (107-21-1)	
LD50 oral (rat)	500 mg/kg
LD50 dermal (rabbit)	≥ 5000 mg/kg
LC50 inhalation (rat) (Vapours - mg/l/4h)	≥ 50 mg/l/4h

Sodium-2-ethylhexanoate (19766-89-3)	
LD50 oral (rat)	2043 mg/kg bodyweight
LD50 dermal (rat)	> 2000 mg/kg bodyweight

Skin corrosion/irritation : Not classified
pH: 8.4 – 8.55 20°C
Serious eye damage/irritation : Not classified
pH: 8.4 – 8.55 20°C
Respiratory or skin sensitisation : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified

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

Reproductive toxicity : Suspected of damaging fertility or the unborn child.
STOT-single exposure : Not classified
STOT-repeated exposure : May cause damage to organs (kidneys) through prolonged or repeated exposure (if swallowed).

Sodium-2-ethylhexanoate (19766-89-3)	
NOAEL (oral, rat, 90 days)	≈ 300 mg/kg bodyweight
NOAEL (subchronic, oral, animal/male, 90 days)	300 mg/kg bodyweight

Aspiration hazard : Not classified

11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
Hazardous to the aquatic environment, short-term (acute) : Not classified
Hazardous to the aquatic environment, long-term (chronic) : Not classified

ethylene glycol (107-21-1)	
LC50 - Fish [1]	72860 mg/l Test organisms (species): Pimephales promelas

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ethylene glycol (107-21-1)

EC50 - Crustacea [1]	> 100 mg/l Test organisms (species): Daphnia magna
Threshold limit - Algae [1]	10000 mg/l 168 Hrs
Threshold limit - Algae [2]	2000 mg/l 192 Hrs

Sodium-2-ethylhexanoate (19766-89-3)

LC50 - Fish [1]	> 100 mg/l Oryzias latipes
EC50 - Crustacea [1]	910 mg/l
EC50 72h - Algae [1]	49.3 mg/l Desmodesmus subspicatus
LOEC (chronic)	63 mg/l 21 d
NOEC (chronic)	25 mg/l 21 d

12.2. Persistence and degradability

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Persistence and degradability	Readily biodegradable.
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ethylene glycol (107-21-1)

Persistence and degradability	Readily biodegradable. easily degradable in the soil.
Biodegradation	90 %

Sodium-2-ethylhexanoate (19766-89-3)

Persistence and degradability	Readily biodegradable.
Biodegradation	> 70 %

12.3. Bioaccumulative potential

ethylene glycol (107-21-1)

Bioconcentration factor (BCF REACH)	10
Partition coefficient n-octanol/water (Log Kow)	-1.36 @25°C

12.4. Mobility in soil

ethylene glycol (107-21-1)

Surface tension	0.048 N/m @20°C
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12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
European List of Waste (LoW) code : 16 01 14* - antifreeze fluids containing dangerous substances

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SECTION 14: Transport information

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

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID 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				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
No supplementary information available				

14.6. Special precautions for user

Overland transport

Not applicable

Transport by sea

Not applicable

Air transport

Not applicable

Inland waterway transport

Not applicable

Rail transport

Not applicable

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

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

Contains no substance subject to Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors.

15.1.2. National regulations

No additional information available

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15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Indication of changes

Section	Changed item	Change	Comments
9.1	Density	Modified	

Full text of H- and EUH-statements:

Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
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.
Repr. 2	Reproductive toxicity, Category 2

The classification complies with : ATP 8

Safety Data Sheet (SDS), EU

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.