Productcode
73970

GLACIER COOLANT RTU G12+

Ready to use Coolant

GLACIER COOLANT RTU G12+ is a long life silicate-, amine-, nitrite- and phosphates free ready to use coolant based on Organic Acid Technology (OAT) technology in ethylene glycol to be used as a cooling and heat transferring fluid in combustion engines.

GLACIER COOLANT RTU G12+ is based on ethylene glycol and in combination of a patent silicate free aliphatic additive technology to obtain the following properties:

- Extended life
- Environmentally friendly
- Reliability
- Excellent corrosion protection for aluminium heat transfer surfaces
- Excellent cavitation protection
- Improved heat transfer
- Reduces repairs
- Improved hard water stability
- Suitable for mixed fleets

GLACIER COOLANT RTU G12+ meets the following performance criteria:

VAG TL 774-D/F	MB 326.3	MAN 324 SNF	GM 6277M
Ford WSS-M97B44D	Cummins IS Series	Detroit Diesel	Deutz/MWM
Hitachi	Liebherr MD1-36	MTU 5048	Renault/Nissan
Volvo	Thermo King		

Typical Analysis

Properties	Unit	Method	Typical Value
Colour			Orange
Density @15°C	kg/m3	ASTM D4052	1060
Refractive Index, 20°C		ASTM D1218	1.39
Equilibrium Boiling Point	°C	ASTM D1120	108
Reserve Alkalinity (pH 5.5)		ASTM D1121	3.0
pH Value		ASTM D1287	8.6
Freezing Protection	°C		-40
Date Issued: 10-6-2021	Supersedes: 26-06-2017		Revision Nr.: 02

73970 - GLACIER COOLANT RTU G12+

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
Reference number: 002386
Issue date: 8/18/2016 Revision date: 10/22/2018 Supersedes version of: 8/18/2016 Version: 4.0

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

1.1. Product identifier

Product form	:	Mixture
Product name	:	73970 - GLACIER COOLANT RTU G12+
Product code	:	73970
Product group	:	Antifreeze

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	:	Anti-freezing agents
Function or use category	:	Anti-freezing agents

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

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 the unborn child..
Precautionary statements (CLP)	:	P201 - Obtain special instructions before use. P202 - Do not handle until all safety precautions have been read and understood.

P264 - Wash hands thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P280 - Wear protective gloves, protective clothing, eye protection, face protection.
P301+P312 - IF SWALLOWED: Call doctor, a POISON CENTER if you feel unwell.

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 : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible). Call a poison center or a doctor if you feel unwell.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Allow affected person to breathe fresh air. Allow the victim to rest.

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 skin with plenty of water.

First-aid measures after eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists. Rinse eyes with water as a precaution.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention. Call a POISON CENTER/doctor if you feel unwell. Call a poison center or a doctor if you feel unwell.

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

Symptoms/effects : May damage fertility. Suspected of damaging the unborn child.

Symptoms/effects after inhalation : After adequate first aid, no further treatment is required unless symptoms reappear. May cause kidney and liver disease, and disorders of the central nervous system.

Symptoms/effects after skin contact : After adequate first aid, no further treatment is required unless symptoms reappear.

Symptoms/effects after eye contact : After adequate first aid, no further treatment is required unless symptoms reappear.

Symptoms/effects after ingestion : Swallowing a small quantity of this material will result in serious health hazard.

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 : Foam. Dry powder. Carbon dioxide. Water spray. Sand.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

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

5.3. Advice for firefighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. 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

Protective equipment : Wear suitable protective clothing and eye/face protection.

Emergency procedures : Ventilate spillage area. Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. Wear suitable protective clothing, gloves and eye/face protection. Equip cleanup crew with proper protection. For further information refer to section 8: "Exposure controls/personal protection".

Emergency procedures : Ventilate area.

6.2. Environmental precautions

Avoid release to the environment. Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

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

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection. 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. Wear personal protective equipment. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour.

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

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Direct sunlight, Heat sources. Keep container closed when not in use. Store in a well-ventilated place. Keep cool.

Incompatible products	:	Strong bases. Strong acids.
Incompatible materials	:	Sources of ignition. Direct sunlight.
Storage temperature	:	50 °C
Storage area	:	Store in a well-ventilated place. Store away from heat.
Special rules on packaging	:	Store in a closed container. Keep only in original container.

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

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

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

Appropriate engineering controls:
Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

Personal protective equipment:
Insulated gloves. Safety glasses. Protective clothing. Avoid all unnecessary exposure.

Personal protective equipment symbol(s):

8.2.2.1. Eye and face protection

Eye protection:
Chemical goggles or safety glasses. Safety glasses

8.2.2.2. Skin protection

Skin and body protection:
Wear suitable protective clothing

Hand protection:
Breakthrough time : refer to the recommendations of the supplier

Hand protection					
Type	**Material**	**Permeation**	**Thickness (mm)**	**Penetration**	**Standard**
Reusable gloves, Disposable gloves	Butyl rubber, Nitrile rubber (NBR), Neoprene rubber (HNBR), Viton® II	6 (> 480 minutes)	0.38		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.

Other information:
Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Colour	:	red.
Odour	:	characteristic.
Odour threshold	:	Not available
Melting point	:	Not applicable
Freezing point	:	-18 °C
Boiling point	:	180 °C
Flammability	:	Non flammable.
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	:	8.6 @20°C
Viscosity, kinematic	:	Not available
Solubility	:	completely soluble.
Partition coefficient n-octanol/water (Log Kow)	:	Not available
Vapour pressure	:	< 0.01 mm Hg
Vapour pressure at 50 °C	:	Not available
Density	:	1113 kg/m³ @20°C
Relative density	:	1.11
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

Not established.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide.

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

73970 - GLACIER COOLANT RTU G12+	
ATE CLP (oral)	510.204 mg/kg bodyweight

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: 8.6 @20°C
Additional information : Based on available data, the classification criteria are not met
Serious eye damage/irritation : Not classified
pH: 8.6 @20°C
Additional information : Based on available data, the classification criteria are not met
Respiratory or skin sensitisation : Not classified
Additional information : Based on available data, the classification criteria are not met

Germ cell mutagenicity : Not classified
Additional information : Based on available data, the classification criteria are not met
Carcinogenicity : Not classified
Additional information : Based on available data, the classification criteria are not met

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

Reproductive toxicity : Suspected of damaging the unborn child..
Additional information : Based on available data, the classification criteria are not met
STOT-single exposure : Not classified
Additional information : Based on available data, the classification criteria are not met
STOT-repeated exposure : May cause damage to organs through prolonged or repeated exposure.
Additional information : Based on available data, the classification criteria are not met

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
Additional information : Based on available data, the classification criteria are not met

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 : Harmful if swallowed.

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
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

73970 - GLACIER COOLANT RTU G12+	
Persistence and degradability	Readily biodegradable. Not established.

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

73970 - GLACIER COOLANT RTU G12+	
Bioaccumulative potential	No data available. Not established.

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

73970 - GLACIER COOLANT RTU G12+	
Ecology - soil	No data available.

ethylene glycol (107-21-1)	
Surface tension	0.048 N/m @20°C

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

Additional information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to a hazardous or special waste collection point.

Ecology - waste materials : Avoid release to the environment.

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

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				
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

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

Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)
Listed on the Canadian DSL (Domestic Substances List)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Listed on the TCSI (Taiwan Chemical Substance Inventory)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on KECL/KECI (Korean Existing Chemicals Inventory)

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Abbreviations and acronyms:	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC50	Median effective concentration
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
PNEC	Predicted No-Effect Concentration
PBT	Persistent Bioaccumulative Toxic
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
vPvB	Very Persistent and Very Bioaccumulative

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Other information : None.

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

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.