



Cooling Fluid -38C G12

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EC) No. 453/2010

Date of issue: 7/9/2015 Revision date: :

Version: 1.0

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

1.1. Product identifier

Product form : Mixture
Article number : 83300
Product code : 833

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

1.2.1. Relevant identified uses

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
rjonker@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	Organization/Company	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	

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 statements : see section 16

2.2. Label elements

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

Hazard pictograms (CLP) :



GHS07

GHS08

Signal word (CLP) : Warning

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

Precautionary statements (CLP) : P260 - Do not breathe gas, mist, vapors, spray
P270 - Do not eat, drink or smoke when using this product
P301+P312 - IF SWALLOWED: Call a POISON CENTER, a doctor if you feel unwell
P330 - Rinse mouth
P501 - Dispose of contents/container in accordance with local regulations.

EUH phrases : EUH210 - Safety data sheet available on request

Security closing plug for children. : No

Tactile warning : No

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2.3. Other hazards

Other hazards. : Vapors mix easily with air. May have damaging effect on respiratory system, central nervous system and liver.

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

SECTION 3: Composition/Information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

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	35 - 45	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	0.1 - 3	Repr. 2, H361d

Full text of H-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures general : In any case of doubt or if symptoms can be observed, get medical attention. Never give anything by mouth to an unconscious person.
- First-aid measures after inhalation : Assure fresh air breathing. Allow the victim to rest. When unconsciousness transport in a recovery position. If breathing is irregular or stopped, administer artificial respiration. Seek medical advice.
- First-aid measures after skin contact : Remove contaminated clothing immediately. Wash with plenty of soap and water. Seek medical attention if ill effect develops.
- First-aid measures after eye contact : Irrigate copiously with clean, fresh water for at least 15 minutes, holding the eyelids apart. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical attention if irritation develops.
- First-aid measures after ingestion : Do NOT induce vomiting. Rinse mouth. Drink plenty of water. Transport to hospital immediately.

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

Call a POISON CENTER or doctor/physician.

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Powder. Alcohol resistant foam. Carbon dioxide. Water spray.
- 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 : Carbon oxides (CO, CO₂). Smoke.

5.3. Advice for firefighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Avoid (reject) fire-fighting water to enter environment.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Remove ignition sources.

6.1.1. For non-emergency personnel

- Emergency procedures : Evacuate unnecessary personnel. Ventilate area.

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6.1.2. For emergency responders

Protective equipment : Do not breathe gas/fumes/vapour/spray. Avoid contact with skin and eyes. Wear proper protective equipment.

6.2. Environmental precautions

Clean up even minor leaks or spills, if possible, without unnecessary risk. Not in groundwater, surface water or sewerage. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment : Place spillage in an appropriate labeled container for disposal.
Methods for cleaning up : Clean up any spills as soon as possible, using an absorbent material to collect it. Flush with plenty of water.

6.4. Reference to other sections

See Heading 8. See Heading 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Do not breathe gas, fumes, vapour or spray. Avoid contact with skin and eyes. Wear suitable protective clothing. Do not eat, drink or smoke when using this product. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in dry, cool, well-ventilated area. Store in original container. Keep container tightly closed.
Incompatible products : Oxidizer. acids.
Incompatible materials : Open flame. sparks. Direct sunlight. heat.
Storage temperature : > -20 °C
Heat-ignition : Keep away from ignition sources.
Packaging materials : polypropylene. Polyethylene. Unsuitable packaging: Rubber, Aluminum.

7.3. Specific end use(s)

See Section 1.2 and / or exposure scenarios.

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
PNEC (Soil)	
PNEC soil	1.53 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	199.5 mg/l

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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

8.2. Exposure controls

Hand protection	: Wear suitable gloves tested to EN374. neoprene gloves. Recommended thickness of the material: ≥ 0.7 mm. Penetration time of glove material: ≥ 480 min. Selection of the glove material on consideration of the penetration times, permeability and degradation. Refer to manufacturer's information.
Eye protection	: Safety glasses
Skin and body protection	: Wear suitable protective clothing
Respiratory protection	: High gas/vapor concentration: gas mask with filter type A
Environmental exposure controls	: See sections 6, 7, 12 and 13.
Other information	: Good ventilation of the workplace required.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Color	: clear. red.
Odor	: Odourless.
Odor threshold	: No data available
pH	: ca. 8.4
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: -25 °C -
Freezing point	: -35 °C
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: P4
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
Specific gravity / density	: 1.045 - 1.057 kg/l
Solubility	: Soluble in water.
Log Pow	: -1.3 (Ethyleenglycol)
Viscosity, kinematic	: 2.1 - 2.7 mm ² /s
Viscosity, dynamic	: No data available
Explosive properties	: Product is not explosive.
Oxidizing properties	: No data available
Explosion limits	: No data available

9.2. Other information

VOC content	: 25 - 50 %
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SECTION 10: Stability and reactivity

10.1. Reactivity

With (strong) oxidizers. Acids.

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10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known.

10.4. Conditions to avoid

High temperature.

10.5. Incompatible materials

Oxidizer. Acids.

10.6. Hazardous decomposition products

Carbon oxides (CO, CO₂).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : if swallowed. Nausea. Shortness of breath. Unconsciousness. Convulsions. Harmful if swallowed.

ATE CLP (oral)	500.000 mg/kg body weight
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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
LC50 inhalation rat (mg/l)	0.11 mg/l

Skin corrosion/irritation : Effects of skin contact may include : redness. Pain. Eczema.
pH: ca. 8.4

Serious eye damage/irritation : Slight eye irritant.
pH: ca. 8.4

Respiratory or skin sensitization : Excessive concentrations may lead to unconsciousness. Symptoms of overexposure to vapors include : Sore throat. Coughing. Nausea. Loss of co-ordination. May cause drowsiness or dizziness. No sensitization responses were observed
Harmful if swallowed

Germ cell mutagenicity : Not mutagenetic.

Carcinogenicity : non carcinogen.

1,2-ethanediol (107-21-1)	
NOAEL (chronic,oral,animal/male,2 years)	1000 mg/kg body weight
NOAEL (chronic,oral,animal/female,2 years)	1000 mg/kg body weight
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified

1,2-ethanediol (107-21-1)	
NOAEL (oral,rat)	200 mg/kg body weight
Specific target organ toxicity (repeated exposure)	: May cause damage to organs

Aspiration hazard : Not classified

83300	
Viscosity, kinematic	2.1 - 2.7 mm ² /s

SECTION 12: Ecological information

12.1. Toxicity

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

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Sodium 2-ethylhexanoate (19766-89-3)	
LC50 fish 1	> 100 mg/l

12.2. Persistence and degradability

83300	
Persistence and degradability	Product is biodegradable.
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.

12.3. Bioaccumulative potential

83300	
Log Pow	-1.3 (Ethyleenglycol)
Bioaccumulative potential	No.
1,2-ethanediol (107-21-1)	
Log Kow	-1.36
Bioaccumulative potential	No.

12.4. Mobility in soil

83300	
Ecology - soil	Water solubility.
1,2-ethanediol (107-21-1)	
Ecology - soil	High. Mobility in soil.
Sodium 2-ethylhexanoate (19766-89-3)	
Ecology - soil	Material highly soluble in water.

12.5. Results of PBT and vPvB assessment

83300	
This substance/mixture does not meet the vPvB criteria of REACH, annex XIII	
Component	
1,2-ethanediol (107-21-1)	This substance/mixture does not meet the PBT criteria of REACH, annex XIII This substance/mixture does not meet the vPvB criteria of REACH, annex XIII
Sodium 2-ethylhexanoate (19766-89-3)	This substance/mixture does not meet the PBT criteria of REACH, annex XIII This substance/mixture does not meet the vPvB criteria of REACH, annex XIII

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

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

SECTION 14: Transport information

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

14.1. UN number

Not regulated for transport

14.2. UN proper shipping name

Proper Shipping Name (ADR) : Not applicable
Proper Shipping Name (IMDG) : Not applicable
Proper Shipping Name (IATA) : Not applicable
Proper Shipping Name (ADN) : Not applicable
Proper Shipping Name (RID) : Not applicable

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : Not applicable

IMDG

Transport hazard class(es) (IMDG) : Not applicable

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IATA

Transport hazard class(es) (IATA) : Not applicable

ADN

Transport hazard class(es) (ADN) : Not applicable

RID

Transport hazard class(es) (RID) : Not applicable

14.4. Packing group

Packing group (ADR) : Not applicable

Packing group (IMDG) : Not applicable

Packing group (IATA) : Not applicable

Packing group (ADN) : Not applicable

Packing group (RID) : Not applicable

14.5. Environmental hazards

Dangerous for the environment : No

Marine pollutant : No

Other information : 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 73/78 and the IBC Code

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 REACH candidate substance

Contains no REACH Annex XIV substances.

VOC content : 25 - 50 %

15.1.2. National regulations

Germany

VwVwS Annex reference : Water hazard class (WGK) 2, hazardous to water (Classification according to VwVwS, Annex 4)

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Netherlands

SZW-lijst van kankerverwekkende stoffen : None of the components are listed

SZW-lijst van mutagene stoffen : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : None of the components are listed

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NIET-limitatieve lijst van voor de voortplanting : None of the components are listed

giftige stoffen – Vruchtbaarheid

NIET-limitatieve lijst van voor de voortplanting : None of the components are listed

giftige stoffen – Ontwikkeling

Denmark

Recommendations Danish Regulation

: Young people below the age of 18 years are not allowed to use the product

Pregnant/breastfeeding women working with the product must not be in direct contact with the product

15.2. Chemical safety assessment

Yes

SECTION 16: Other information

Indication of changes:

2.1	Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]	Added	

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-phrases:

Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Repr. 2	Reproductive toxicity Category 2
STOT RE 2	Specific target organ toxicity (repeated exposure) Category 2
H302	Harmful if swallowed
H361d	Suspected of damaging the unborn child
H373	May cause damage to organs through prolonged or repeated exposure
EUH210	Safety data sheet available on request

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