



Antifreeze

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830
Issue date: 3-7-2018 Revision date: 6-2-2020 Supersedes: 3-7-2018 Version: 1.1

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

1.1. Product identifier

Product form : Mixture
Trade name : Antifreeze
Product code : 10.10.01
Product group : Trade product

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

1.2.1. Relevant identified uses

Intended for general public
Main use category : Industrial use, Professional use, Consumer use
Use of the substance/mixture : Antifreeze

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Kroon Oil BV
Dollegoorweg 15
7602 EC Almelo - Netherlands
T 0031 (0)546 81 81 65
vib@kroon-oil.nl

1.4. Emergency telephone number

Emergency number : +44 1255 502372

Country	Organisation/Company	Address	Emergency number	Comment
Ireland	National Poisons Information Centre Beaumont Hospital	PO Box 1297 Beaumont Road 9 Dublin	+353 1 809 2566 (Healthcare professionals- 24/7) +353 1 809 2166 (public, 8am - 10pm, 7/7)	
United Kingdom	National Poisons Information Service (Cardiff Centre) Gwenwyn Ward, Llandough Hospital	Penarth CF64 2XX Cardiff	0344 892 0111	

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

Adverse physicochemical, human health and environmental effects

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

Antifreeze

Safety Data Sheet

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

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

Hazard statements (CLP) :

H302 - Harmful if swallowed.

H373 - May cause damage to organs (kidneys) through prolonged or repeated exposure (oral).

Precautionary statements (CLP) :

P101 - If medical advice is needed, have product container or label at hand.

P102 - Keep out of reach of children.

P264 - Wash hands thoroughly after handling.

P270 - Do not eat, drink or smoke when using this product.

P314 - Get medical advice/attention if you feel unwell.

P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards

No additional information available

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	25 – 80	Acute Tox. 4 (Oral), H302 STOT RE 2, H373
sodium 2-ethylhexanoate	(CAS-No.) 19766-89-3 (EC-No.) 243-283-8 (REACH-no) 01-2119972937-17	0,1 – 5	Repr. 2, H361

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general :

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.

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

Symptoms/effects after inhalation :

Inhalation may affect the nervous system causing headache, possibly dizziness, nausea, weakness, loss of coordination and unconsciousness.

Symptoms/effects after ingestion :

Ingestion may cause nausea, vomiting and diarrhea.

Antifreeze

Safety Data Sheet

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

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 : Water spray. Dry powder. Foam. Carbon dioxide.
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. Incomplete combustion releases dangerous carbon monoxide, carbon dioxide and other toxic gases.

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/vapours/spray.

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.
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. Wear personal protective equipment. Do not breathe dust/fume/gas/mist/vapours/spray.
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 in a well-ventilated place. Keep cool.

7.3. Specific end use(s)

No additional information available

Antifreeze

Safety Data Sheet

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

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

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

EU - Occupational Exposure Limits

Local name	Ethylene glycol
IOELV TWA (mg/m ³)	52 mg/m ³
IOELV TWA (ppm)	20 ppm
IOELV STEL (mg/m ³)	104 mg/m ³
IOELV STEL (ppm)	40 ppm
Notes	Skin
Regulatory reference	COMMISSION DIRECTIVE 2000/39/EC

United Kingdom - Occupational Exposure Limits

Local name	Ethane-1,2-diol
WEL TWA (mg/m ³)	10 mg/m ³ particulate 52 mg/m ³ vapour
WEL TWA (ppm)	20 ppm vapour
WEL STEL (mg/m ³)	104 mg/m ³ vapour
WEL STEL (ppm)	40 ppm vapour
Remark (WEL)	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

8.2. Exposure controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

Hand protection:

Protective gloves

Type	Material	Permeation	Thickness (mm)	Penetration	Standard
Reusable gloves	Nitrile rubber (NBR)	6 (> 480 minutes)	≥ 0.35		EN ISO 374

Eye protection:

Safety glasses

Type	Use	Characteristics	Standard
Safety glasses	Droplet	clear	EN 166

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

Antifreeze

Safety Data Sheet

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

Personal protective equipment symbol(s):



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	: Blue.
Odour	: characteristic.
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: 198 °C
Flash point	: 111 °C - ASTM D93 (PM)
Auto-ignition temperature	: 320 °C
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not applicable
Vapour pressure	: 6 Pa (20°C)
Relative vapour density at 20 °C	: No data available
Relative density	: 1,1 (20°C)
Solubility	: Soluble in water.
Partition coefficient n-octanol/water (Log Pow)	: -1,36
Viscosity, kinematic	: 19,03 mm ² /s (20°C)
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

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

No additional information available

Antifreeze

Safety Data Sheet

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

10.6. Hazardous decomposition products

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

SECTION 11: Toxicological information

11.1. Information on toxicological effects

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

Antifreeze

ATE CLP (oral)	625 mg/kg bodyweight
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1,2-ethanediol (107-21-1)

LD50 oral rat	7712 mg/kg bodyweight Animal: rat
LD50 dermal	3500 mg/kg bodyweight mouse
LC50 inhalation rat (mg/l)	> 2,5 mg/l

sodium 2-ethylhexanoate (19766-89-3)

LD50 oral rat	2043 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 401 (Acute Oral Toxicity), 95% CL: 1445 - 2890
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)

Skin corrosion/irritation : Not classified
Serious eye damage/irritation : Not classified
Respiratory or skin sensitisation : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified

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

NOAEL (chronic, oral, animal/male, 2 years)	1500 mg/kg bodyweight Animal: mouse, Animal sex: male, Remarks on results: other:Effect type: carcinogenicity (migrated information)
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Reproductive toxicity : Not classified
STOT-single exposure : Not classified
STOT-repeated exposure : May cause damage to organs (kidneys) through prolonged or repeated exposure (oral).

sodium 2-ethylhexanoate (19766-89-3)

NOAEL (oral, rat, 90 days)	≈ 300 mg/kg bodyweight Animal: rat, Guideline: EPA OTS 795.2600 (Subchronic Oral Toxicity Test)
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Aspiration hazard : Not classified

Antifreeze

Viscosity, kinematic	19,03 mm ² /s (20°C)
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Antifreeze

Safety Data Sheet

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

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

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

LC50 fish	72860 mg/l Test organisms (species): Pimephales promelas
EC50 Daphnia	> 100 mg/l Test organisms (species): Daphnia magna
EC50 96h algae (1)	3536 mg/l Test organisms (species): other:greenn algae
EC50 96h algae (2)	6500 – 13000 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
NOEC (chronic)	≥ 1000 mg/l Test organisms (species): Americamysis bahia (previous name: Mysidopsis bahia) Duration: '23 d'

sodium 2-ethylhexanoate (19766-89-3)

LC50 fish	> 100 mg/l Test organisms (species): Oryzias latipes
EC50 Daphnia	910 mg/l Test organisms (species): Daphnia magna
EC50 72h algae (1)	49,3 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
LOEC (chronic)	63 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC (chronic)	25 mg/l Test organisms (species): Daphnia magna Duration: '21 d'

12.2. Persistence and degradability

Antifreeze

Persistence and degradability	Biodegradable.
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1,2-ethanediol (107-21-1)

Biodegradation	90 % > 10d (OECD 301A method)
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12.3. Bioaccumulative potential

Antifreeze

Partition coefficient n-octanol/water (Log Pow)	-1,36
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1,2-ethanediol (107-21-1)

Partition coefficient n-octanol/water (Log Kow)	-1,36
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12.4. Mobility in soil

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

Partition coefficient n-octanol/water (Log Koc)	1
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12.5. Results of PBT and vPvB assessment

No additional information available

Antifreeze

Safety Data Sheet

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

12.6. 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

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				
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. Transport in bulk according to Annex II of Marpol 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 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.

Antifreeze

Safety Data Sheet

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

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

15.1.2. National regulations

No additional information available

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
	Revision date	Added	
	Issue date	Modified	
9.1	Melting point	Added	

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
LD50	Median lethal dose
LC50	Median lethal concentration
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
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
STP	Sewage treatment plant
TLM	Median Tolerance Limit
SDS	Safety Data Sheet
vPvB	Very Persistent and Very Bioaccumulative

Antifreeze

Safety Data Sheet

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

Full text of H- and EUH-statements:	
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.
H361	Suspected of damaging fertility or the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.

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.