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

1.1. Product identifier

Product form	:	Mixture
Product name	:	ANTI-FREEZE
UFI	:	P8WF-DF8D-KF0S-JTAW
Product code	:	5020
Type of product	:	WOC
Product group	:	Blend

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

1.2.1. Relevant identified uses

Main use category	:	Industrial use,Professional use,Consumer use
Industrial/Professional use spec	:	Non-dispersive use Used in closed systems
Function or use category	:	Liquid for car cooling circuit

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

WOLF OIL CORPORATION N.V.
Georges Gilliotstraat, 52
2620 Hemiksem, Antwerpen
België
T 0032 (0)3 870 00 00, F 0032 (0)3 870 00 99
msds@wolfoil.com

1.4. Emergency telephone number

Emergency number : 0032 (0)3 870 00 00

Country/Area	Organisation/Company	Address	Emergency number	Comment
Ireland	National Poisons Information Centre Beaumont Hospital	PO Box 1297 Beaumont Road 9	+353 1 809 2566 (Healthcare professionals-24/7) +353 1 809 2166 (public, 8am - 10pm, 7/7)	
Israel	Israel Poison Information Center Rambam Health Care Campus	6 Ha'Aliya Street 31096	+972 4 854 1900	
Malta	Medicines & Poisons Info Office	Mater Dei Hospital Msida MSD 2090	+356 2545 6508	
Sweden	Giftinformationscentralen	Box 60 500 171 76 Stockholm	112 – begär Giftinformation +46 10 456 6700 (Från utlandet)	

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- and EUH-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
Contains : ethanediol; ethylene glycol
Hazard statements (CLP) : H302 - Harmful if swallowed.
H373 - May cause damage to organs (kidneys) through prolonged or repeated exposure (on ingestion).
Precautionary statements (CLP) : P260 - Do not breathe vapours, gas, mist, fume, spray, dust.
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 in accordance with local/regional/national/international regulations.
P101 - If medical advice is needed, have product container or label at hand.
P102 - Keep out of reach of children.

2.3. Other hazards

Contains no PBT/vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

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 at a concentration equal to or greater than 0,1 %

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]
ethanediol	CAS-No.: 107-21-1 EC-No.: 203-473-3 EC Index-No.: 603-027-00-1 REACH-no: 01-2119456816-28	90 – 100	Acute Tox. 4 (Oral), H302 (ATE=500 mg/kg bodyweight) STOT RE 2, H373
Dipotassium tetraborate	CAS-No.: 12045-78-2 EC-No.: 215-575-5 REACH-no: 01-2119970730-37	0.1 – 0.5	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 after inhalation : Allow affected person to breathe fresh air. Place the victim in semi-seated position. Seek medical advice.

First-aid measures after skin contact : After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water. Seek medical attention if ill effect or irritation develops.

First-aid measures after eye contact : In case of eye contact, immediately rinse with clean water for 10-15 minutes. Contact lenses should be removed. Seek medical attention if ill effect or irritation develops. Remove lenses.

First-aid measures after ingestion : Do not induce vomiting. Give water to drink if victim completely conscious/alert. Get immediate medical advice/attention.

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

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Foam. Dry chemical product. Carbon dioxide. sand.

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

Precautionary measures fire : Exercise caution when fighting any chemical fire.

Firefighting instructions : Use water spray or fog for cooling exposed containers.

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

6.1.1. For non-emergency personnel

Protective equipment : Wear suitable protective clothing and gloves.

6.1.2. For emergency responders

Protective equipment : Wear suitable protective clothing and gloves.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment : Impound and recover large spill by mixing it with inert granular solids.

Methods for cleaning up : Detergent. Take up liquid spill into absorbent material sand, saw dust, kieselguhr.

Other information : Spill area may be slippery. Use suitable disposal containers.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Avoid all unnecessary exposure. Both local exhaust and general room ventilation are usually required. Remove ignition sources. No open flames. No smoking. Do not breathe vapours. Avoid: acids. Moisture. combustible materials. Take precautionary measures against static discharges.

Hygiene measures : 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 area : Store in dry, cool, well-ventilated area.

Special rules on packaging : Packaging destined for the general public must be fitted with a tactile danger indication.

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

ANTI-FREEZE	
EU - Indicative Occupational Exposure Limit (IOEL)	
IOEL TWA	60 mg/m³ @8h
IOEL STEL	125 mg/m³ @ 15 min.

ethanediol (107-21-1)	
EU - Indicative Occupational Exposure Limit (IOEL)	
IOEL TWA	52 mg/m³
	20 ppm
IOEL STEL	104 mg/m³
	40 ppm
Ireland - Occupational Exposure Limits	
OEL TWA	52 mg/m³
	20 ppm
OEL STEL	40 mg/m³
	104 ppm
Sweden - Occupational Exposure Limits	
NGV (OEL TWA)	25 mg/m³
	10 ppm
KTV (OEL STEL)	25 mg/m³
	10 ppm

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:
Safety glasses. Gloves.

Personal protective equipment symbol(s):

8.2.2.1. Eye and face protection

Eye protection:
Safety glasses

8.2.2.2. Skin protection

Skin and body protection:
No special clothing/skin protection equipment is recommended under normal conditions of use

Hand protection:
Permeation time: minimum >480min long term exposure; material / thickness [mm]: >0,35 mm. Nitrile rubber (NBR) /

8.2.2.3. Respiratory protection

Respiratory protection:
In case of insufficient ventilation, wear suitable respiratory equipment

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

No additional information available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Colour	:	red.
Appearance	:	Liquid.
Odour	:	odourless.
Odour threshold	:	Not available
Melting point	:	-12 °C
Freezing point	:	Not available
Boiling point	:	≥ 197 °C
Flammability	:	Not available
Lower explosion limit	:	Not available
Upper explosion limit	:	Not available
Flash point	:	111 °C (ASTM D92)
Auto-ignition temperature	:	400 °C
Decomposition temperature	:	Not available
pH	:	8.4 @50%

Viscosity, kinematic	:	21 mm²/s @20°C
Viscosity, dynamic	:	23.52 mPa·s @20°C
Solubility	:	Miscible.
Partition coefficient n-octanol/water (Log Kow)	:	Not available
Vapour pressure	:	0.05 kPa @20°C
Vapour pressure at 50°C	:	Not available
Density	:	1.125 kg/m³ @20°C
Relative density	:	Not available
Relative vapour density at 20°C	:	Not available
Particle characteristics	:	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

None under normal conditions.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

None under normal conditions.

10.4. Conditions to avoid

heat. sparks. open flames. Moisture.

10.5. Incompatible materials

No data available.

10.6. Hazardous decomposition products

None under normal conditions.

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

ANTI-FREEZE	
ATE CLP (oral)	500 mg/kg bodyweight

ethanediol (107-21-1)	
LD50 oral rat	500 mg/kg
LD50 dermal rat	10000 mg/kg
LD50 dermal rabbit	> 5000 mg/kg
LC50 Inhalation - Rat	> 2.5 mg/l/4h @6h

Dipotassium tetraborate (12045-78-2)	
LD50 oral rat	3690 mg/kg
LD50 dermal rabbit	2000 – 5000 mg/kg
LC50 Inhalation - Rat	> 2 g/m³

Skin corrosion/irritation : Not classified
pH: 8.4 @50%

Serious eye damage/irritation : Not classified
pH: 8.4 @50%

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

ethanediol (107-21-1)	
NOAEL (chronic, oral, animal/male, 2 years)	1000 mg/kg bodyweight
NOAEL (chronic, oral, animal/female, 2 years)	1500 mg/kg bodyweight

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

STOT-repeated exposure : May cause damage to organs (kidneys) through prolonged or repeated exposure (on ingestion).

ethanediol (107-21-1)	
NOAEL (oral, rat, 90 days)	220200 mg/kg bodyweight/day OECD 407
NOAEL (dermal, rat/rabbit, 90 days)	2220 mg/kg bodyweight/day OECD 410
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard : Not classified

ANTI-FREEZE	
Viscosity, kinematic	21 mm²/s @20°C

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 : Ingestion may cause nausea, vomiting and diarrhea

SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short–term (acute) : Not classified

Hazardous to the aquatic environment, long–term (chronic) : Not classified

ethanediol (107-21-1)	
LC50 - Fish [1]	41000 mg/l @96h - Oncorhynchus mykiss
LC50 - Fish [2]	> 14 – < 18 ml/l @96h - Oncorhynchus mykiss (static)
EC50 - Crustacea [1]	46300 mg/l @48h - Daphnia magna
EC50 - Crustacea [2]	> 100 mg/l
EC50 96h - Algae [1]	> 6500 – < 13000 mg/l

ethanediol (107-21-1)	
NOEC chronic fish	15380 mg/l @ 7d - Pimephales promelas
NOEC chronic crustacea	8590 mg/l

Dipotassium tetraborate (12045-78-2)	
LC50 - Fish [1]	80 – 627 mg/l
EC50 - Crustacea [1]	133 mg/l Daphnia magna

12.2. Persistence and degradability

ANTI-FREEZE	
Persistence and degradability	Prevent entry to sewers and public waters.

ethanediol (107-21-1)	
Persistence and degradability	Rapidly degradable
Biochemical oxygen demand (BOD)	0.47 g O_2/g substance
Chemical oxygen demand (COD)	1.29 g O_2/g substance
Biodegradation	90 %

Dipotassium tetraborate (12045-78-2)	
Persistence and degradability	Rapidly degradable

12.3. Bioaccumulative potential

ethanediol (107-21-1)	
Bioconcentration factor (BCF REACH)	10
Partition coefficient n-octanol/water (Log Pow)	-1.36

12.4. Mobility in soil

ethanediol (107-21-1)	
Surface tension	49890 N/m @25°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 : Presents no specific risk for the environment

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Additional information : Dispose in a safe manner in accordance with local/national regulations.

SECTION 14: Transport information

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

14.1. UN number or ID 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

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

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. 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

REACH Annex XVII (Restriction List)

Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)

REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

Dual-Use Regulation (428/2009)

Contains no substance subject to the COUNCIL REGULATION (EC) No 428/2009 of 5 May 2009 setting up a Community regime for the control of exports, transfer, brokering and transit of dual-use items.

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

15.1.2. National regulations

France

Occupational diseases	
Code	Description
RG 84	Conditions caused by liquid organic solvents for professional use: saturated or unsaturated aliphatic or cyclic liquid hydrocarbons and mixtures thereof; liquid halogenated hydrocarbons; nitrated derivatives of aliphatic hydrocarbons; alcohols; glycols, glycol ethers; ketones; aldehydes; aliphatic and cyclic ethers, including tetrahydrofuran; esters; dimethylformamide and dimethylacetamine; acetonitrile and propionitrile; pyridine; dimethylsulfone and dimethylsulfoxide

Germany

Water hazard class (WGK) : WGK 1, Slightly hazardous to water (Classification according to AwSV, Annex 1).
Hazardous Incident Ordinance (12. BImSchV) : Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

Netherlands

SZW-lijst van kankerverwekkende stoffen : None of the components are listed
SZW-lijst van mutagene stoffen : None of the components are listed
SZW-lijst van reprotoxische stoffen – Borstvoeding : None of the components are listed
SZW-lijst van reprotoxische stoffen – Vruchtbaarheid : None of the components are listed
SZW-lijst van reprotoxische stoffen – Ontwikkeling : None of the components are listed

Denmark

Danish National Regulations : 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

No additional information available

SECTION 16: Other information

Indication of changes			
Section	**Changed item**	**Change**	**Comments**
	Revision date	Modified	
	SDS EU format	Modified	
	Supersedes	Modified	
9.1	Flash point	Modified	
9.1	Density	Modified	
9.1	Colour	Modified	

Other information : The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable.

Full text of H- and EUH-statements:	
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
H302	Harmful if swallowed.
H361d	Suspected of damaging the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.
Repr. 2	Reproductive toxicity, Category 2
STOT RE 2	Specific target organ toxicity – Repeated exposure, 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.