

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Product form : Mixture  
Trade name : Antifreeze LL 12  
Product code : VC.10.04  
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 and coolant

**1.2.2. Uses advised against**

No additional information available

**1.3. Details of the supplier of the safety data sheet**

VatOil  
Dollegoorweg 15  
7602 EC Almelo - Netherlands  
T 0031 (0)546 81 81 65  
[vib@vatoil.com](mailto:vib@vatoil.com)

**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  
Reproductive toxicity, Category 2 H361  
Specific target organ toxicity — Repeated exposure, Category 2 H373  
Full text of H statements : see section 16

**Adverse physicochemical, human health and environmental effects**

Suspected of damaging fertility or the unborn child. May cause damage to organs through prolonged or repeated exposure. Harmful if swallowed.

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## 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; 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 (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.  
P280 - Wear protective gloves, eye protection.  
P301+P310 - IF SWALLOWED: Immediately call a doctor.  
P405 - Store locked up.  
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

Comments

: The potassium hydroxide and 2-ethylhexanoic acid are neutralised in the formulation so that although they are both corrosive materials the final formulation is non-corrosive

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	≥ 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	2,5 – 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

: IF exposed or concerned: Get medical advice/attention. 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.

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### 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.

### 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. 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/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 locked up. Store in a well-ventilated place. Keep cool.

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### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

Antifreeze LL 12	
EU - Occupational Exposure Limits	
IOELV TWA (mg/m <sup>3</sup> )	60 mg/m <sup>3</sup>
IOELV STEL (mg/m <sup>3</sup> )	125 mg/m <sup>3</sup>

1,2-ethanediol (107-21-1)	
EU - Occupational Exposure Limits	
Local name	Ethylene glycol
IOELV TWA (mg/m <sup>3</sup> )	52 mg/m <sup>3</sup>
IOELV TWA (ppm)	20 ppm
IOELV STEL (mg/m <sup>3</sup> )	104 mg/m <sup>3</sup>
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 <sup>3</sup> )	10 mg/m <sup>3</sup> particulate 52 mg/m <sup>3</sup> vapour
WEL TWA (ppm)	20 ppm vapour
WEL STEL (mg/m <sup>3</sup> )	104 mg/m <sup>3</sup> 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

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Type	Use	Characteristics	Standard
Safety glasses	Droplet	clear	EN 166

### Skin and body protection:

Wear suitable protective clothing

### Respiratory protection:

[In case of inadequate ventilation] wear respiratory protection.

### 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	: pink.
Odour	: characteristic.
Odour threshold	: No data available
pH	: 8,5 – 8,7
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: Not applicable
Freezing point	: -18 °C
Boiling point	: 180 °C
Flash point	: 122 °C - ASTM D93 (PM)
Auto-ignition temperature	: 410 °C
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not applicable
Vapour pressure	: 10 Pa (20°C)
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 1,11 (15 °C) - ASTM D4052
Solubility	: Soluble in water.
Partition coefficient n-octanol/water (Log Pow)	: No data available
Partition coefficient n-octanol/water (Log Kow)	: -1,36
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Lower explosive limit (LEL)	: 3,2 vol %
Upper explosive limit (UEL)	: 53 vol %

### 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.

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### 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

### 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 LL 12

ATE CLP (oral)	510,204 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  
pH: 8,5 – 8,7  
Serious eye damage/irritation : Not classified  
pH: 8,5 – 8,7  
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 : 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 (oral).

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### 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

## 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

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Persistence and degradability	Readily biodegradable. 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

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Partition coefficient n-octanol/water (Log Kow)	-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 K <sub>oc</sub> )	1
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### 12.5. Results of PBT and vPvB assessment

No additional information available

### 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 15 - antifreeze fluids other than those mentioned in 16 01 14

## SECTION 14: Transport information

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

ADR	IMDG	IATA	ADN	RID
<b>14.1. UN number</b>				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
<b>14.2. UN proper shipping name</b>				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
<b>14.3. Transport hazard class(es)</b>				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
<b>14.4. Packing group</b>				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
<b>14.5. Environmental hazards</b>				
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. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable



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### 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

Child-resistant fastening : Not applicable

Tactile warning : Applicable

##### 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
2.2	Precautionary statements (CLP)	Modified	
16	Abbreviations and acronyms	Modified	

#### 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

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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
BLV	Biological limit value
CAS-No.	Chemical Abstract Service number
EC-No.	European Community number
EN	European Standard
OEL	Occupational Exposure Limit
WGK	Water Hazard Class

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.