

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

Product form	: Mixture
Trade name	: VatOil Antifreeze LL 14
UFI	: Q1G0-5071-V00G-FK98
Product code	: VC.10.05
Type of product	: Heat Transfer Fluids
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
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**

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

**1.4. Emergency telephone number**

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)	
United Kingdom	National Poisons Information Service (Cardiff Centre) University Hospital Llandough	Penlan Road CF64 2XX	0344 892 0111	Only for healthcare professionals

**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**

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

# VatOil Antifreeze LL 14

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

### 2.2. Label elements

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

Hazard pictograms (CLP)



- Signal word (CLP) : Warning
- Contains : 1,2-ethanediol
- Hazard statements (CLP) : H302 - Harmful if swallowed.  
H373 - May cause damage to organs (kidneys) through prolonged or repeated exposure (if swallowed).
- Precautionary statements (CLP) : P101 - If medical advice is needed, have product container or label at hand.  
P102 - Keep out of reach of children.  
P260 - Do not breathe vapours, mist.  
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.  
P330 - Rinse mouth.  
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

Contains no PBT and/or vPvB substances  $\geq 0.1\%$  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 substance(s) are 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]
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	$\geq 80$	Acute Tox. 4 (Oral), H302 STOT RE 2, H373

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 : 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.

# VatOil Antifreeze LL 14

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

### 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 skin contact	: None under normal conditions.
Symptoms/effects after eye contact	: None under normal conditions.
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

Fire hazard	: Combustible liquid.
Explosion hazard	: No direct explosion hazard.
Hazardous decomposition products in case of fire	: Incomplete combustion releases dangerous carbon monoxide, carbon dioxide and other toxic gases.

### 5.3. Advice for firefighters

Firefighting instructions	: Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.
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

General measures	: Stop leak if safe to do so. Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material damage.
------------------	---

#### 6.1.1. For non-emergency personnel

Protective equipment	: Wear recommended personal protective equipment.
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".
Emergency procedures	: Evacuate unnecessary personnel. Stop leak if safe to do so.

### 6.2. Environmental precautions

Avoid release to the environment.

### 6.3. Methods and material for containment and cleaning up

For containment	: Absorb spilled material with sand or earth. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak without risks if possible.
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.

# VatOil Antifreeze LL 14

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Additional hazards when processed	: Not expected to present a significant hazard under anticipated conditions of normal use.
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

Technical measures	: Keep in a cool, well-ventilated place away from heat.
Storage conditions	: Keep cool. Protect from sunlight.
Storage temperature	: < 40 °C
Packaging materials	: Store always product in container of same material as 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

1,2-ethanediol (107-21-1)	
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA)	52 mg/m <sup>3</sup> vapour

##### 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:

Wear recommended personal protective equipment.

###### Personal protective equipment symbol(s):



##### 8.2.2.1. Eye and face protection

###### Eye protection:

Safety glasses

# VatOil Antifreeze LL 14

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Eye protection			
Type	Field of application	Characteristics	Standard
Safety glasses	Droplet	clear	EN 166

### 8.2.2.2. Skin protection

#### Skin and body protection:

Wear suitable protective clothing

#### Hand protection:

Protective gloves

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

### 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

#### 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-green.
Odour	: characteristic.
Odour threshold	: Not available
Melting point	: Not applicable
Freezing point	: -18 °C
Boiling point	: > 180 °C
Flammability	: Not applicable
Lower explosion limit	: 3,2 vol %
Upper explosion limit	: 53 vol %
Flash point	: 111 °C Derived from flash point MEG (CAS: 107-21-1). Because of the presence of water, a flashpoint cannot be measured.
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: 8,3 (8,2 – 8,4)
Viscosity, kinematic	: Not available
Solubility	: Water: Miscible in all proportions
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50°C	: Not available
Density	: 1,134 g/cm <sup>3</sup> (15 °C) - ASTM D4052
Relative density	: Not available
Relative vapour density at 20°C	: Not available
Particle characteristics	: Not applicable

# VatOil Antifreeze LL 14

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

### 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

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use. Reacts violently with (strong) oxidizers.

### 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 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

VatOil Antifreeze LL 14	
ATE CLP (oral)	510,204 mg/kg bodyweight
1,2-ethanediol (107-21-1)	
LD50 oral rat	7712 mg/kg bodyweight
LD50 oral	There is a marked difference in acute oral toxicity between rodents and man, man being more susceptible than rodents. The estimated fatal dose for man is 30-100 milliliters. This material has also been shown to be toxic and potentially lethal by ingestion to cats and dogs.
LD50 dermal	3500 mg/kg bodyweight mouse
LC50 Inhalation - Rat	> 2,5 mg/l

Skin corrosion/irritation : Not classified  
pH: 8,3 (8,2 – 8,4)  
Serious eye damage/irritation : Not classified  
pH: 8,3 (8,2 – 8,4)  
Respiratory or skin sensitisation : Not classified  
Germ cell mutagenicity : Not classified  
Carcinogenicity : Not classified

# VatOil Antifreeze LL 14

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

### 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)
---	--

Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: May cause damage to organs (kidneys) through prolonged or repeated exposure (if swallowed).

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

STOT-repeated exposure	May cause damage to organs (kidneys) through prolonged or repeated exposure (if swallowed).
------------------------	---

Aspiration hazard	: Not classified
-------------------	------------------

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

Viscosity, kinematic	14,505 mm <sup>2</sup> /s
----------------------	---------------------------

## 11.2. Information on other hazards

No additional information available

## 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 [1]	72860 mg/l Test organisms (species): Pimephales promelas
EC50 - Crustacea [1]	> 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'

### 12.2. Persistence and degradability

#### VatOil Antifreeze LL 14

Persistence and degradability	Biodegradable.
-------------------------------	----------------

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

Persistence and degradability	Rapidly degradable
Biodegradation	90 % > 10d (OECD 301A method)

### 12.3. Bioaccumulative potential

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

Partition coefficient n-octanol/water (Log Kow)	-1,36
---	-------

# VatOil Antifreeze LL 14

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

### 12.4. Mobility in soil

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

Organic Carbon Normalized Adsorption Coefficient (Log Koc)	1
--	---

### 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

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Regional waste regulation	: Disposal must be done according to official regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	: Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	: Disposal must be done according to official regulations.
Additional information	: Do not re-use empty containers.
European List of Waste (LoW, EC 2000/532)	: 16 01 14* - antifreeze fluids containing dangerous substances
HP Code	: HP5 - "Specific Target Organ Toxicity (STOT)/Aspiration Toxicity:" waste which can cause specific target organ toxicity either from a single or repeated exposure, or which cause acute toxic effects following aspiration. HP6 - "Acute Toxicity:" waste which can cause acute toxic effects following oral or dermal administration, or inhalation exposure.

## SECTION 14: Transport information

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

ADR	IMDG	IATA	ADN	RID
<b>14.1. UN number or ID number</b>				
Not regulated for transport				
<b>14.2. UN proper shipping name</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
<b>14.3. Transport hazard class(es)</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
<b>14.4. Packing group</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
<b>14.5. Environmental hazards</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
No supplementary information available				

### 14.6. Special precautions for user

#### Overland transport

Not regulated



# VatOil Antifreeze LL 14

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

### Transport by sea

Not regulated

### Air transport

Not regulated

### Inland waterway transport

Not regulated

### Rail transport

Not regulated

## 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)

EU restriction list (REACH Annex XVII)		
Reference code	Applicable on	Entry title or description
3(b)	VatOil Antifreeze LL 14 ; 1,2-ethanediol	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10

##### 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.

##### Biocide Regulation (528/2012)

Child-resistant fastening : Not applicable

Tactile warning : Applicable

##### 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)

# VatOil Antifreeze LL 14

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

### 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
	Supersedes	Modified	
	Revision date	Modified	
	Type of product	Added	
1.2	Use of the substance/mixture	Modified	
2.2	Hazard statements (CLP)	Modified	
4.2	Symptoms/effects after eye contact	Added	
4.2	Symptoms/effects after skin contact	Added	
5.2	Explosion hazard	Added	
5.3	Firefighting instructions	Added	
6.1	Emergency procedures	Added	
6.1	Protective equipment	Added	
6.1	General measures	Added	
6.3	For containment	Added	
7.1	Additional hazards when processed	Added	
7.2	Packaging materials	Added	
7.2	Technical measures	Added	
7.2	Storage conditions	Modified	
8.2	Personal protective equipment	Added	
9.1	Flash point	Modified	
11.1	ATE CLP (oral)	Modified	
13.1	Waste disposal recommendations	Added	
13.1	Sewage disposal recommendations	Added	
13.1	Additional information	Added	
13.1	Regional waste regulation	Added	

### Abbreviations and acronyms:

CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
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

# VatOil Antifreeze LL 14

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Abbreviations and acronyms:	
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
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
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disrupting properties

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

Safety Data Sheet (SDS), EU

# VatOil Antifreeze LL 14

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

---

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.