

according to Regulation (EC) No 1907/2006

VA-013

Print date: 01.09.2017

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

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

engine coolant

1.3. VAICO No V60-0164-A

1.4. Details of the supplier of the safety data sheet

Company name:	VIEROL AG	
Street:	Karlstrasse 19	
Place:	26123 Oldenburg, Germany	
Telephone:	+49 (0) 441 – 210 20 - 0	Telefax:+49 (0) 441 – 210 20 - 111
Internet:	www.vierol.de	

1.5. Emergency telephone number: Giftinformationszentrum Nord (Göttingen)
+49 (0)551/19240

SECTION 2: Hazards identification
2.1. Classification of the substance or mixture
Regulation (EC) No. 1272/2008

Hazard categories:

Acute toxicity: Acute Tox. 4

Serious eye damage/eye irritation: Eye Irrit. 2

Specific target organ toxicity - repeated exposure: STOT RE 2

Hazard Statements:

Harmful if swallowed.

Causes serious eye irritation.

May cause damage to organs through prolonged or repeated exposure.

2.2. Label elements
Regulation (EC) No. 1272/2008
Hazard components for labelling

ethanediol, ethylene glycol

Signal word: Warning

Pictograms:

Hazard statements

H302	Harmful if swallowed.
H319	Causes serious eye irritation.
H373	May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

P301+P312	IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P330	Rinse mouth.
P337+P313	If eye irritation persists: Get medical advice/attention.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

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Do not breathe dust/fume/gas/mist/vapours/spray.

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients**3.2. Mixtures****Hazardous components**

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification according to Regulation (EC) No. 1272/2008 [CLP]			
107-21-1	ethanediol, ethylene glycol			>25 %
	203-473-3	603-027-00-1	60-3027001	
	Acute Tox. 4, STOT RE 2; H302 H373			
3164-85-0	Potassium 2-ethyl hexanoate			<3 %
	221-625-7		*	
	Repr. 2, Skin Irrit. 2, Eye Dam. 1; H361d H315 H318			

Full text of H and EUH statements: see section 16.

SECTION 4: First aid measures**4.1. Description of first aid measures****General information**

Provide fresh air. Remove casualty to fresh air and keep warm and at rest.

After inhalation

Remove affected person from the danger area and lay down . If unconscious place in recovery position and seek medical advice.

After contact with skin

Remove contaminated, saturated clothing. After contact with skin, wash immediately with plenty of water and soap.

After contact with eyes

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time , then consult an ophthalmologist immediately.

After ingestion

Rinse mouth immediately and drink plenty of water. Induce vomiting when the affected person is not unconscious. Medical treatment necessary. Do NOT induce vomiting.

4.2. Most important symptoms and effects, both acute and delayed

No information available.

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**Co-ordinate fire-fighting measures to the fire surroundings. alcohol resistant foam. Carbon dioxide (CO2)
Extinguishing powder Water mist**Unsuitable extinguishing media**

Strong water jet

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5.2. Special hazards arising from the substance or mixtureIn case of fire may be liberated: Carbon dioxide (CO₂). Carbon monoxide.**5.3. Advice for firefighters**

In case of fire: Wear self-contained breathing apparatus.

Additional information

Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately.
Do not allow entering drains or surface water.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment.

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

6.4. Reference to other sections

Safe handling: see section 7
Personal protection equipment: see section 8
Disposal: see section 13

SECTION 7: Handling and storage**7.1. Precautions for safe handling****Advice on safe handling**

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

Advice on protection against fire and explosion

No special fire protection measures are necessary.

7.2. Conditions for safe storage, including any incompatibilities**Requirements for storage rooms and vessels**

Keep container tightly closed. Keep locked up. Store in a place accessible by authorized persons only. Provide adequate ventilation as well as local exhaustion at critical locations.

Advice on storage compatibility

No special measures are necessary.

7.3. Specific enduse(s)

engine coolant

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****Exposure limits(EH40)**

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
107-21-1	Ethane-1,2-diol, vapour	20	52		TWA (8 h)	WEL
		40	104		STEL (15 min)	WEL

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DNEL/DMEL values

CAS No	Substance	Exposure route	Effect	Value
107-21-1	ethanediol, ethylene glycol			
Worker DNEL, long-term		inhalation	local	35 mg/m ³
Worker DNEL, long-term		dermal	systemic	106 mg/kg bw/day
Consumer DNEL, long-term		inhalation	local	7 mg/m ³
Consumer DNEL, long-term		dermal	systemic	53 mg/kg bw/day
3164-85-0	Potassium 2-ethyl hexanoate			
Worker DNEL, long-term		inhalation	systemic	32 mg/m ³
Worker DNEL, long-term		dermal	systemic	12 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	8 mg/m ³
Consumer DNEL, long-term		dermal	systemic	6 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	2,5 mg/kg bw/day

PNEC values

CAS No	Substance	Value
107-21-1	ethanediol, ethylene glycol	
Freshwater		10 mg/l
Marine water		1 mg/l
Freshwater sediment		37 mg/kg
Marine sediment		3,7 mg/kg
Soil		1,53 mg/kg
3164-85-0	Potassium 2-ethyl hexanoate	
Freshwater		0,36 mg/l
Freshwater sediment		6,37 mg/l
Marine sediment		0,637 mg/l
Soil		1,06 mg/l

8.2. Exposure controls**Appropriate engineering controls**

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

Protective and hygiene measures

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink.

Eye/face protection

Suitable eye protection: goggles.

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Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Skin protection

Wear suitable protective clothing.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Physical state:	liquid
Colour:	violet
Odour:	odourless

Test method

pH-Value:	7,5-9
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Changes in the physical state

Melting point:	-12 °C
Initial boiling point and boilingrange:	>170 °C
Flash point:	> 111 °C

Flammability

Solid:	not applicable
Gas:	not applicable

Lower explosion limits:	not determined
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Upper explosion limits:	not determined
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Auto-ignition temperature

Solid:	not applicable
Gas:	not applicable

Decomposition temperature:	not determined
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Oxidizing properties

Not oxidizing.

Vapour pressure: (at 20 °C)	8 hPa
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Density (at 20 °C):	1,12 g/cm ³
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Water solubility:	easily soluble
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Solubility in other solvents

not determined

Partition coefficient:	not determined
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Viscosity / dynamic: (at 20 °C)	23,52 mPa·s
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Viscosity / kinematic: (at 20 °C)	21 mm ² /s
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Vapour density:	not determined
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Evaporation rate:	not determined
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9.2. Other information

Solid content: not determined

SECTION 10: Stability and reactivity**10.1. Reactivity**

No hazardous reaction when handled and stored according to provisions.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

No known hazardous reactions.

10.4. Conditions to avoid

Oxidising agent, strong Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

10.5. Incompatible materials

No information available.

10.6. Hazardous decomposition products

No known hazardous decomposition products.

SECTION 11: Toxicological information**11.1. Information on toxicological effects****Acute toxicity**

Harmful if swallowed.

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	
107-21-1	ethanediol, ethylene glycol				
	oral	LD50 7712 mg/kg	Rat		
	dermal	LD50 10600 mg/kg	Rabbit	GESTIS	

Irritation and corrosivity

Causes serious eye irritation.

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

Sensitising effects

Based on available data, the classification criteria are not met.

Carcinogenic/mutagenic/toxic effects for reproduction

Based on available data, the classification criteria are not met.

STOT-single exposure

Based on available data, the classification criteria are not met.

STOT-repeated exposure

May cause damage to organs through prolonged or repeated exposure. (ethanediol, ethylene glycol)

Aspiration hazard

Based on available data, the classification criteria are not met.

Additional information on tests

This mixture is classified as hazardous according to regulation (EC) No. 1272/2008 [CLP].

SECTION 12: Ecological information

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12.1. Toxicity

The product is not: Ecotoxic.

CAS No	Chemical name				
	Aquatic toxicity	Dose	[h] [d]	Species	Source
107-21-1	ethanediol, ethylene glycol				
	Acute fish toxicity	LC50	72860 mg/l	96 h	Pimephales promelas (fathead minnow)
					Experimental data

12.2. Persistence and degradability

The product has not been tested.

12.3. Bioaccumulative potential

The product has not been tested.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
107-21-1	ethanediol, ethylene glycol	-1,36

12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT and vPvB assessment

The product has not been tested.

12.6. Other adverse effects

No information available.

Further information

Avoid release to the environment.

SECTION 13: Disposal considerations**13.1. Waste treatment methods****Advice on disposal**

Do not allow to enter into surface water or drains. Dispose of waste according to applicable legislation.

Waste disposal number of waste from residues/unused products

070104 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the manufacture, formulation, supply and use (MFSU) of basic organic chemicals; other organic solvents, washing liquids and mother liquors
Classified as hazardous waste.

Waste disposal number of used product

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by hazardous substances
Classified as hazardous waste.

Contaminated packaging

This material and its container must be disposed of as hazardous waste. Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information**Land transport (ADR/RID)**

- 14.1. UN number:** No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name: No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es): No dangerous good in sense of this transport regulation.

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14.4. Packing group:	No dangerous good in sense of this transport regulation.
Inland waterways transport (ADN)	
14.1. UN number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.
Marine transport (IMDG)	
14.1. UN number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.
Air transport (ICAO)	
14.1. UN number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.
14.5. Environmental hazards	
ENVIRONMENTALLY HAZARDOUS:	no
14.6. Special precautions for user	
	No dangerous good in sense of this transport regulation.
14.7. Transport in bulk according to Annex II of Marpol and the IBC Code	
	No dangerous good in sense of this transport regulation.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**EU regulatory information**

2004/42/EC (VOC): 24,99 % (279,888 g/l)

National regulatory information

Employment restrictions: Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Water contaminating class (D): 1 - slightly water contaminating

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route (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

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LC50: Lethal concentration, 50%

LD50: Lethal dose, 50%

Relevant H and EUH statements (number and full text)

H302	Harmful if swallowed.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H361d	Suspected of damaging the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.

Further Information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)