

according to Regulation (EG) No. 1907/2006

1. IDENTIFICATION OF THE MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Trade Name:

VAICO VA-DOT 4

VAICO No.:

V60-0242, V60-0074, V60-0075, V60-0111

1.2. Informing department

VIEROL AG | Karlstraße 19 | 26123 Oldenburg | Germany

Telefon +49 441 - 210 20-0 | Telefax +49 441 - 210 20-111

1.3. Emergency telephone number

Telephone: +49 180 2273-112

Telefax number: +49 621 60-92664

2. HAZARDS IDENTIFICATION

Risk of serious damage to eyes.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical nature
Blend based on: glycol ether, polyglycoether, inhibitors

3.1. Hazardous ingredients

3.1.1. 2-(2-(2-butoxyethoxy)ethoxy)ethanol
Content (W/W): > 11 % - < 26 %
CAS Number: 143-22-6
EC-Number: 205-592-6
INDEX-Number: 603-183-00-0
Hazard symbol(s): Xi
R-phrase(s): 41

3.1.2. 2-(2-hexyloxyethoxy)ethanol
Content (W/W): > 8 % - < 12 %
CAS Number: 112-59-4
EC-Number: 203-988-3
INDEX-Number: 603-175-00-7
Hazard symbol(s): Xn
R-phrase(s): 21, 41

3.1.3. Diethylene glycol
Content (W/W): > 10 % - < 15 %
CAS Number: 111-46-6
EC-Number: 203-872-2
INDEX-Number: 603-140-00-6
Hazard symbol(s): Xn
R-phrase(s): 22

3.1.4. Aliphatic amine
Content (W/W): > 1 % - < 3 %
Hazard symbol(s): Xi
R-phrase(s): 36

The wording of the hazard symbols and R-phrases is specified in chapter 16 if dangerous ingredients are mentioned.

4. FIRST AID MEASURES

- 4.1. **General advice:**
Remove contaminated clothing.
- 4.2. **If inhaled:**
If difficulties occur after vapour/aerosol has been inhaled, remove to fresh air and seek medical attention.
- 4.3. **On skin contact:**
Wash thoroughly with soap and water.
- 4.4. **On contact with eyes:**
Immediately wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.
- 4.5. **On ingestion:**
Rinse mouth immediately and then drink plenty of water, seek medical attention.
- 4.6. **Note to physician:**
Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. FIREFIGHTING MEASURES

- 5.1. Suitable extinguishing media:**
water, dry extinguishing media, foam
- 5.2. Specific hazards:**
harmful vapours
Evolution of fumes/fog. The substances/groups of substances mentioned can be released in case of fire.
- 5.3. Further information:**
The degree of risk is governed by the burning substance and the fire conditions. Contaminated extinguishing water must be disposed of in accordance with official regulations.

6. ACCIDENTAL RELEASE MEASURES

- 6.1. Personal precautions:**
Use personal protective clothing.
- 6.2. Environmental precautions:**
Contain contaminated water/firefighting water. Do not discharge into drains/surface waters/groundwater.
- 6.3. Methods for cleaning up or taking up:**
- 6.3.1. For large amounts:
Pump off product.
- 6.3.2. For residues:
Pick up with suitable absorbent material. Dispose of absorbed material in accordance with regulations.

7. HANDLING AND STORAGE

- 7.1. Handling**
Ensure thorough ventilation of stores and work areas. Prevent contact with air/oxygen (formation of peroxide).
- 7.1.1. Protection against fire and explosion:
Take precautionary measures against static discharges.
- 7.2. Storage**
Further information on storage conditions: Keep container tightly closed and dry; store in a cool place.
Protect from temperatures above: 40 °C

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1. Personal protective equipment

- 8.1.1. Respiratory protection:
Respiratory protection in case of vapour/aerosol release. Particle filter with medium efficiency for solid and liquid particles (e.g. EN 143 or 149, Type P2 or FFP2)
- 8.1.2. Hand protection:
Chemical resistant protective gloves (EN 374)
Suitable materials also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN 374):
nitrile rubber (NBR) - 0.4 mm coating thickness
- 8.1.2.1. Supplementary note:
The specifications are based on tests, literature data and information of glove manufacturers or are derived from similar substances by analogy. Due to many conditions (e.g. temperature) it must be considered, that the practical usage of a chemical-protective glove in practice may be much shorter than the permeation time determined through testing. Manufacturer's directions for use should be observed because of great diversity of types.
- 8.1.3. Eye protection:
Tightly fitting safety goggles (cage goggles) (e.g. EN 166) and face shield.
- 8.1.4. General safety and hygiene measures:
Handle in accordance with good industrial hygiene and safety practice. Wearing of closed work clothing is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

<i>Form:</i>	<i>Liquid</i>	
<i>Colour:</i>	<i>colourless to yellowish</i>	
<i>Odor: pr</i>	<i>odour specific</i>	
<i>pH value:</i>	<i>7.5 - 9.5 (500 g/l)</i>	
<i>Melting point:</i>	<i>< -50 °C</i>	
<i>Boiling point:</i>	<i>> 260 °C (1,013 hPa)</i>	
<i>Flash point:</i>	<i>> 120 °C</i>	<i>(DIN 51758)</i>
<i>Ignition temperature:</i>	<i>> 200 °C</i>	<i>(DIN 51794)</i>
<i>Vapour pressure:</i>	<i>< 1 mbar (50 °C)</i>	
<i>Density:</i>	<i>1.04 g/cm³ (20 °C)</i>	<i>(DIN 51757)</i>
<i>Solubility in water:</i>	<i>completely soluble (20 °C)</i>	
<i>Hygroscopy:</i>	<i>hygroscopic</i>	
<i>Solubility (qualitative) solvent(s):</i>	<i>alcohols soluble</i>	

10. STABILITY AND REACTIVITY

- 10.1. **Thermal decomposition:**
No decomposition if used as directed.
- 10.2. **Hazardous reactions:**
No hazardous reactions when stored and handled according to instructions.
- 10.3. **Hazardous decomposition products:**
No hazardous decomposition products known.

11. TOXICOLOGICAL INFORMATION

- 11.1. Acute toxicity**
LD50 rat (oral): > 2,000 mg/kg
- 11.2. Irritation**
Primary skin irritation rabbit: non-irritant (OECD Guideline 404)
Primary irritations of the mucous membrane rabbit: Risk of serious damage to eyes. (OECD Guideline 405)
- 11.3. Other relevant toxicity information**
The product has not been tested. The statements on toxicology have been derived from the properties of the individual components.

12. ECOLOGICAL INFORMATION

- 12.1. Ecotoxicity**
- 12.1.1. Toxicity to fish:
LC50 (96 h) > 100 mg/l, *Leuciscus idus*
- 12.1.2. Aquatic invertebrates:
EC50 (48 h) > 100 mg/l, *Daphnia magna* (OECD Guideline 202, part 1)
- 12.1.3. Microorganisms/Effect on activated sludge:
EC20 (0.5 h) > 100 mg/l, activated sludge (OECD Guideline 209)
- The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.
- 12.2. Persistence and degradability**
- 12.2.1. Assessment biodegradation and elimination (H2O):
The single components are biological degradable. Easily eliminated from water.
- 12.3. Additional information**
- 12.3.1. Other ecotoxicological advice:
The product has not been tested. The statements on ecotoxicology have been derived from the properties of the individual components.

13. DISPOSAL CONSIDERATIONS

Must be dumped or incinerated in accordance with local regulations.

- 13.1. Contaminated packaging:**
Uncontaminated packaging can be re-used.
Packs that cannot be cleaned should be disposed of in the same manner as the contents.

14. TRANSPORT INFORMATION

- 14.1. Land transport**
ADR Not classified as a dangerous good under transport regulations
RID Not classified as a dangerous good under transport regulations
- 14.2. Inland waterway transport**
ADNR Not classified as a dangerous good under transport regulations
- 14.3. Sea transport**
IMDG Not classified as a dangerous good under transport regulations
- 14.4. Air transport**
IATA/ICAO Not classified as a dangerous good under transport regulations

15. REGULATORY INFORMATION

- 15.1. Regulations of the European union (Labelling) / National legislation/Regulations**
Directive 1999/45/EC („Preparation Directive“):
- 15.1.1. Hazard symbol(s)
Xi Irritant.
- 15.1.2. R-phrases(s)
R41 Risk of serious damage to eyes.
- 15.1.3. S-phrases(s)
S39 Wear eye/face protection.
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- Hazard determining component(s) for labelling: TRIETHYLENEGLYCOL MONOBUTYLETHER
- 15.2. Other regulations**
No data available.

16. OTHER INFORMATION

- 16.1. Full text of hazard symbols and R-phrases if mentioned as hazardous components in chapter 3:**
- Xi Irritant.
Xn Harmful.
41 Risk of serious damage to eyes.
21 Harmful in contact with skin.
22 Harmful if swallowed.
36 Irritating to eyes.

Vertical lines in the left hand margin indicate an amendment from the previous version. The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. The data do not describe the product's properties (product specification). Neither should any agreed property nor the suitability of the product for any specific purpose be deduced from the data contained in the safety data sheet. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.