

MATERIAL SAFETY DATA SHEET

va-Q-accu 27L+22G

in accordance with 91/155/EWG item Code A100028uk



Version: V.EN / 01.A2722
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1. IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY / UNDERTAKING

- 1.1 Identification of the substance or preparation: va-Q-accu 27L+22G
- 1.2 Use of the substance/preparation: Heat accumulator
- 1.3 Company/Undertaking identification: va-Q-tec AG
Karl-Ferdinand-Braun-Str. 7
97080 Wuerzburg / Germany
Tel.: +49 (0)931 35942 – 0
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e-mail: info@va-Q-tec.com
- 1.4 Emergency telephone: Tel.: +49 (0)931 35942 – 0

2. HAZARDS IDENTIFICATION

Note: EEC-labelling: Xn, harmful

- 2.1 Potential dangers to health and environment
May cause damage to lung if swallowed.
Repeated exposure may cause skin dryness or cracking.
- 2.2 Danger of fire and explosion
Slight risk. Product creates only ignitable mixtures or burns, if temperature exceeds flash point.

3. COMPOSITION / INFORMATION ON INGREDIENTS

- 3.1 Liquid
Chemical characterisation: Liquid saturated hydrocarbons, molecular formula C_nH_{2n+2}
CAS-number: 64771-72-8
EINECS-Number: 265-233-4
- 3.2 Shell: High density polyethylene
CAS-Nr.: 9002-32-4

4. FIRST AID MEASURES

In case of escape of the contained liquid from the container

- 4.1 Inhalation:
The person is to be removed immediately from premises and made to rest in a well-ventilated area. Consult a doctor.
- 4.2 Eye contact:
Wash immediately with water. If irritation persists seek medical advice.
- 4.3 Skin contact:

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Wash with plenty of water and soap. Change contaminated cloths.

- 4.4 If swallowed:
Do not under any circumstances induce vomiting. Keep person calm and consult a doctor.

5. FIRE-FIGHTING MEASURES

- 5.1 Suitable extinguishing media
Carbon dioxide, foam, dry powder, sand, water mist
- 5.2 Extinguishing media that must not be used for safety reasons
Water
- 5.3 Special exposure hazards arising from the substance, its combustion products or from resulting gases
In the case of fire, combustion gases are formed: Carbon monoxide (CO), carbon dioxide (CO₂), smoke
- 5.4 Special protective equipment for fire fighting
Use self-contained breathing apparatus.
- 5.5 Additional information
Cool endangered containers externally with water
Fire class according to DIN-EN 2: B

6. ACCIDENTAL RELEASE MEASURES

- 6.1 Personal precautions
Remove persons to safe place. Use gloves and protective clothing.
- 6.2 Environmental precautions
Try to stop leakage.
- 6.3 Solid / liquid
Do not allow to enter drains/surface waters/groundwater.
In case of the leakage of a large amount inform the responsible authorities.
- 6.4 Methods for cleaning up
Remove mechanically. Use spill absorbent material.

7. HANDLING AND STORAGE

- 7.1 Handling
Hints on safe handling: No special measures necessary if used correctly.
Hints for protection against fire and explosion: Product vapours can form explosive mixture with air.
- 7.2 Storage

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Requirements for storage rooms and containers: Be careful when open container. Do not store product close to open fire, heat or ignition sources. Material could electrostatic charge and eventually discharge. Thus take precautions (grounding and bonding) against electrostatic charge and prevent ignition sources.

7.3 Specific use(s)
None

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Exposure limit values

Technical measures / Ventilation:

Assure appropriate ventilation if product is used at elevated temperatures in closed rooms.

8.2 Exposure control

8.2.1 Occupational exposure control (Germany)

n-paraffins C5-C20 from petroleum:

MAK = 200 ppm (1000 mg/m³)

Group 1, TRGS 900/901 (1997)

8.2.1.1 Respiratory protection:

When exceeding occupational exposure limits (maximum workplace concentration; MAK-value) for aerosols use appropriate breathing apparatus.

8.2.1.2 Hand protection:

Wear suitable protective gloves

8.2.1.3 Eye protection:

Wear safety goggles

8.2.1.4 Skin protection:

Protective clothing

8.2.2 Environmental exposure controls

Sealed floor or metal tray

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Fluid:

Physical state:	Liquid
Colour:	Green
Odour:	Odourless
pH-value:	Aqueous extract: Neutral
Melting range:	+18 °C to +22 °C
Boiling range:	+290 °C to +315 °C
Flash point (ASTM D 92):	140 °C
Ignition temperature:	> 200 °C
Lower / Upper explosion limit:	0.6 / 7 Vol. %

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Vapour pressure at 20 °C:	< 0.01 hPa
Density at 15 °C (DIN 51 757):	780 kg/m ³
Relative density (101.3 kPa/air = 1):	> 1
Solubility at 20 °C:	< 0.10 mg/l (in water)
Viscosity at 100 °C (DIN 51 562):	1.5 mm ² /s

9.2 Outer shell:

Type:	Hard, odourless
Colour:	White / Transparent
Melting Point:	130 °C ... 140 °C
Flash Point:	330 °C ... 350 °C
Ignition Temperature:	440 °C

10. STABILITY AND REACTIVITY

- 10.1 Conditions to avoid
Under normal conditions no hazardous reactions likely
- 10.2 Material to avoid
Strong oxidising agents
- 10.3 Hazardous decomposition products
None

11. TOXICOLOGICAL INFORMATION

- 11.1 Inhalation:
Vapour concentration above the occupational exposure limit causes irritation of the respiratory tract. Long or repeated exposures to high concentrations of oil vapours or oil fogs may cause lung deposition (granuloma), inflammation or higher risk of infections.
- 11.2 Skin contact:
Repeated or long-time skin contact causes degreasing and drying of skin. This could lead to skin irritation and skin inflammation
- 11.3 Eye contact:
Causes only slight eye irritation, but no eye damage.
- 11.4 If swallowed:
Also small amounts of the product, which has been respired during ingestion or vomiting, may cause pneumonia or pulmonary oedema.

12. ECOLOGICAL INFORMATION

Product is insoluble in water. It can be removed mechanically in a purification plant.

- 12.1 Degradability
Data are estimated or based on data of similar substances. It is expected, that product is readily biodegradable in accordance to OECD guidelines.

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12.2 Aquatic toxicity

Data are estimated or based on data of similar substances. Due to the poor water solubility it is expected that there is no acute toxicity for water organisms.

13. DISPOSAL CONSIDERATIONS

13.1 Fluid

After re-conditioning the product may be used again or thermally employed.
Can be disposed off after consultation with the responsible authorities according to the following waste disposal codes (European Waste Catalogue).

<u>EWC-Code</u>	<u>Description</u>
07 01 04	Organic solvents, washing liquids and mother liquors.
07 01 99	Wastes not otherwise specified

13.2 Shell

The plastic outer casing may be user again after emptying the cooling fluid.

14. TRANSPORT INFORMATION

(ADR/RID; BinSchV/ADNR/ADN; IMDG/GGVSee; ICAO-TI and IATA-DGR):

Products like this one are not hazardous goods at temperatures < 100°C.

15. REGULATORY INFORMATION

15.1 Labelling in accordance with EC-regulations: Xn Harmful

15.2 Product is labelled and classified in accordance to 67/548/EEF (Dangerous Substances Directive) as amended.

15.3 Dangerous substance: Paraffin (petroleum), normal

Risk-phase, R-phase:

R65 Harmful. May cause lung damage if swallowed.

Safety advice, S-phase:

S23 Do not inhale gas / smoke / vapour / aerosol
S24 Avoid contact with skin
S62 If swallowed do not induce vomiting!
Seek medical advice and show this data sheet

15.4 National regulations

<u>Germany:</u> Classification according to VbF:	Not applicable
<u>TA Luft:</u>	Substance class 3.1.7. III
<u>Water hazard class (WGK):</u>	1
<u>StörfallVO:</u>	Not applicable
<u>Swiss:</u>	BAG-T-Nr: 610200, Poison class: 0

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16. OTHER INFORMATION

None

This Safety data sheet describes a product group. It contains only safety related information. For specific data see product data sheet.

Although the information contained herein is presented in good faith and to the best of va-Q-tec's knowledge and experience, it is made without any warranty or guarantee whatsoever.

In case any question should arise please call the number given in point 1.

va-Q-tec AG