

SAFETY DATA SHEET

Based on Directive 2001/58/EC of the Commission of the European Communities

VERGACOL

1. Identification of the substance/preparation and of the company/undertaking:

1.1 Identification of the substance or preparation:

Product name: Vergacol

1.2 Use of the substance or the preparation:

Sealant

- Sealant

2. Composition/information on ingredients :

| Hazardous ingredients | CAS No. EINECS/ELINCS No. | Conc. In % | Hazard symbol | Risks (R-phrases) |
|--|---------------------------------|------------|---------------|--|
| xylene, mixture of isomers | 1330-20-7 215-535-7 | 1 - <12.5 | Xn | 10-20/21-38 (1) |
| ethylbenzene | 100-41-4 202-849-4 | 1 - <5 | F;Xn | 11-20 (1) |
| butanone | 78-93-3 201-159-0 | 10 - <20 | F;Xi | 11-36-66-67 (1) |
| low boiling point hydrogen treated naphtha (conc benzene < 0.1%) | 64742-49-0 265-151-9 | 10 - <20 | F;Xn;N | 11-51/53-65-66-67 (1) (Labelling in compliance with CONCAWE) |

(1) For R-phrases in full: see heading 16

3. Hazards identification :

- Highly flammable
- Repeated exposure may cause skin dryness or cracking
- Vapours may cause drowsiness and dizziness
- Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment

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4. First aid measures:

4.1 Eye contact:

- Rinse immediately with plenty of water
- Seek medical advice

4.2 Skin contact:

- Rinse immediately with plenty of water
- If irritation persists: seek medical advice

4.3 After inhalation:

- Remove the victim into fresh air
- Seek medical advice

4.4 After ingestion:

- Never give water to an unconscious person
- Do not induce vomiting
- Seek medical advice

5. Fire fighting measures:

5.1 Suitable extinguishing media:

- Polyvalent foam
- BC powder
- Carbon dioxide

5.2 Unsuitable extinguishing media:

- None

5.3 Special exposure hazards:

- On burning: release of toxic and corrosive gases/vapours: hydrogen chloride, carbon monoxide and carbon dioxide
- Gas/vapour spreads at floor level: ignition hazard
- Gas/vapour flammable with air within explosion limits

5.4 Instructions:

- Dilute toxic gases with water spray

5.5 Special protective equipment for firefighters:

- Heat/fire exposure: compressed air/oxygen apparatus
- Protective clothing for exposure to chemicals

6. Accident release measures:

6.1 Personal protection/precautions:

See heading 8.2/13

6.2 Environmental precautions:

- Use appropriate containment to avoid environmental contamination

6.3 Methods for cleaning up:

- Scoop solid spill into closing containers
- Carefully collect the spill/leftovers
- Clean contaminated surfaces with an excess of water
- Wash clothing and equipment after handling

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7. Handling and storage:

7.1 Handling:

- Insufficient ventilation: use spark-/explosionproof appliances and lighting system
- Avoid prolonged and repeated contact with skin
- Do not discharge the waste into the drain
- Remove contaminated clothing immediately

7.2 Storage:

- Keep container tightly closed
- Store in a dry area
- Ventilation at floor level
- Keep away from: heat sources, ignition sources

Storage temperature : 20 °C

Quantity limits : N.D. kg

Storage life : 365 days

Materials for packaging :

- suitable :tin, polyamide

7.3 Specific uses:

- See information supplied by the manufacturer

8. Exposure controls/Personal protection:

8.1 Exposure limit values:

XYLENE, MIXTURE OF ISOMERS:

| | | | | |
|------------------------|---|--------------|------------------|------------|
| TLV-TWA | : | mg/m3 | 100 | ppm |
| TLV-STEL | : | mg/m3 | 150 | ppm |
| TLV-Ceiling | : | mg/m3 | | ppm |
| OES-LTEL | : | 220 | mg/m3 50 | ppm |
| OES-STEL | : | 441 | mg/m3 100 | ppm |
| MAK | : | 440 | mg/m3 100 | ppm |
| TRK | : | | mg/m3 | ppm |
| MAC-TGG 8 h | : | 210 | mg/m3 | |
| MAC-TGG 15 min. | : | | mg/m3 | |
| MAC-Ceiling | : | | mg/m3 | |
| VME-8 h | : | 435 | mg/m3 100 | ppm |
| VLE-15 min. | : | 650 | mg/m3 150 | ppm |
| GWBB-8 h | : | 440 | mg/m3 100 | ppm |
| GWK-15 min. | : | 660 | mg/m3 150 | ppm |
| Momentary value | : | mg/m3 | | ppm |
| EC | : | 221 | mg/m3 50 | ppm |
| EC-STEL | : | 442 | mg/m3 100 | ppm |

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ETHYLBENZENE:

| | | | | | |
|------------------|---|-------|-------|-----|-----|
| TLV-TWA | : | mg/m3 | 100 | ppm | |
| TLV-STEL | : | mg/m3 | 125 | ppm | |
| TLV-Ceiling | : | mg/m3 | | ppm | |
| OES-LTEL | : | 441 | mg/m3 | 100 | ppm |
| OES-STEL | : | 552 | mg/m3 | 125 | ppm |
| MAK | : | - | mg/m3 | - | ppm |
| TRK | : | | mg/m3 | | ppm |
| MAC-TGG 8 h | : | 215 | mg/m3 | | |
| MAC-TGG 15 min.: | | | mg/m3 | | |
| MAC-Ceiling | : | | mg/m3 | | |
| VME-8 h | : | 435 | mg/m3 | 100 | ppm |
| VLE-15 min. | : | - | mg/m3 | - | ppm |
| GWBB-8 h | : | 440 | mg/m3 | 100 | ppm |
| GWK-15 min. | : | 551 | mg/m3 | 125 | ppm |
| Momentary value: | | | mg/m3 | | ppm |
| EC | : | 442 | mg/m3 | 100 | ppm |
| EC-STEL | : | 884 | mg/m3 | 200 | ppm |

BUTANONE:

| | | | | | |
|------------------|---|-------|-------|-----|-----|
| TLV-TWA | : | mg/m3 | 200 | ppm | |
| TLV-STEL | : | mg/m3 | 300 | ppm | |
| TLV-Ceiling | : | mg/m3 | | ppm | |
| OES-LTEL | : | 600 | mg/m3 | 200 | ppm |
| OES-STEL | : | 899 | mg/m3 | 300 | ppm |
| MAK | : | 600 | mg/m3 | 200 | ppm |
| TRK | : | | mg/m3 | | ppm |
| MAC-TGG 8 h | : | 590 | mg/m3 | | |
| MAC-TGG 15 min.: | | | mg/m3 | | |
| MAC-Ceiling | : | | mg/m3 | | |
| VME-8 h | : | 600 | mg/m3 | 200 | ppm |
| VLE-15 min. | : | - | mg/m3 | - | ppm |
| GWBB-8 h | : | 599 | mg/m3 | 200 | ppm |
| GWK-15 min. | : | 898 | mg/m3 | 300 | ppm |
| Momentary value: | | | mg/m3 | | ppm |
| EC | : | 600 | mg/m3 | 200 | ppm |
| EC-STEL | : | 900 | mg/m3 | 300 | ppm |

8.2 Exposure controls:

8.2.1 Occupational exposure controls:

- Use only in well ventilated area

8.2.2 Environmental exposure controls: see heading 13

8.3 Personal protection:

8.3.1 respiratory protection:

- In case of insufficient ventilation: respiratory protection with filtertype A

8.3.2 hand protection:

- Chemically resistant gloves

8.3.3 eye protection:

- Safety glasses

8.3.4 skin protection:

- Suitable protective clothing

VERGACOL

9. Physical and chemical properties:

9.1 General information:

Appearance (at 20°C) : Viscous
Odour : Solvent
Colour : Variable in colour

9.2 Important health, safety and environmental information:

pH value : N.D.
Boiling point/boiling range : N.D. °C
Flashpoint : < 23 °C
Explosion limits : N.D. vol%
Vapour pressure (at 20°C) : N.D. hPa
Vapour pressure (at 50°C) : < 1100 hPa
Relative density (at 20°C) : > 1
Water solubility : Insoluble
Soluble in : Organic solvents
Relative vapour density : > 1
Flow time Ø(6 mm) (according to ISO 2431) : > 100 s
Viscosity : N.D. Pa.s
Partition coefficient n-octanol/water : N.D.
Evaporation rate
 ratio to butyl acetate : N.D.
 ratio to ether : N.D.

9.3 Other information:

Melting point/melting range : N.D. °C
Auto-ignition point : N.D. °C
Saturation concentration : N.D. g/m³

10. Stability and reactivity:

10.1 Conditions to avoid/reactivity:

- Stable under normal conditions

10.2 Materials to avoid:

- Keep away from: heat sources, ignition sources

10.3 Hazardous decomposition products:

- On burning: release of toxic and corrosive gases/vapours: hydrogen chloride, carbon monoxide, carbon dioxide and formation of metallic fumes

VERGACOL

11. Toxicological information:

11.1 Acute toxicity:

XYLENE, MIXTURE OF ISOMERS:

| | | |
|---------------------|----------|----------|
| LD50 oral rat | : > 4300 | mg/kg |
| LD50 dermal rat | : > 2000 | mg/kg |
| LD50 dermal rabbit | : > 1700 | mg/kg |
| LC50 inhalation rat | : 22 | mg/l/4 h |
| LC50 inhalation rat | : 5000 | ppm/4 h |

ETHYLBENZENE:

| | | |
|---------------------|---------|----------|
| LD50 oral rat | : 3500 | mg/kg |
| LD50 dermal rat | : N.D. | mg/kg |
| LD50 dermal rabbit | : 15415 | mg/kg |
| LC50 inhalation rat | : 17 | mg/l/4 h |
| LC50 inhalation rat | : 4000 | ppm/4 h |

BUTANONE:

| | | |
|---------------------|---------|----------|
| LD50 oral rat | : 2737 | mg/kg |
| LD50 dermal rat | : N.D. | mg/kg |
| LD50 dermal rabbit | : 6480 | mg/kg |
| LC50 inhalation rat | : 34 | mg/l/4 h |
| LC50 inhalation rat | : 11300 | ppm/4 h |

11.2 Chronic toxicity:

XYLENE, MIXTURE OF ISOMERS:

| | |
|---------------|--------------|
| EC carc. cat. | : not listed |
| EC muta. cat. | : not listed |
| EC repr. cat. | : not listed |

| | |
|------------------------|--------------|
| Carcinogenicity (TLV) | : A4 |
| Carcinogenicity (MAC) | : not listed |
| Carcinogenicity (VME) | : not listed |
| Carcinogenicity (GWBB) | : not listed |

| | |
|-----------------------|--------------|
| Carcinogenicity (MAK) | : not listed |
| Mutagenicity (MAK) | : not listed |
| Teratogenicity (MAK) | : D |

| | |
|---------------------|-----|
| IARC classification | : 3 |
|---------------------|-----|

ETHYLBENZENE:

| | |
|---------------|--------------|
| EC carc. cat. | : not listed |
| EC muta. cat. | : not listed |
| EC repr. cat. | : not listed |

| | |
|------------------------|--------------|
| Carcinogenicity (TLV) | : A3 |
| Carcinogenicity (MAC) | : not listed |
| Carcinogenicity (VME) | : not listed |
| Carcinogenicity (GWBB) | : not listed |

| | |
|-----------------------|------|
| Carcinogenicity (MAK) | : 3A |
| Mutagenicity (MAK) | : - |
| Teratogenicity (MAK) | : - |

| | |
|---------------------|------|
| IARC classification | : 2B |
|---------------------|------|

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BUTANONE:

EC carc. cat. : not listed
EC muta. cat. : not listed
EC repr. cat. : not listed

Carcinogenicity (TLV) : not listed
Carcinogenicity (MAC) : not listed
Carcinogenicity (VME) : not listed
Carcinogenicity (GWBB) : not listed

Carcinogenicity (MAK) : not listed
Mutagenicity (MAK) : not listed
Teratogenicity (MAK) : C

IARC classification : not listed

11.3 Routes of exposure: ingestion, inhalation, eyes and skin
Caution! Substance is absorbed through the skin

11.4 Acute effects/symptoms:

AFTER INHALATION:

EXPOSURE TO HIGH CONCENTRATIONS:

- CNS depression
- Dizziness
- Narcosis
- Headache
- Irritation of the respiratory tract
- Nausea
- Irritation of the nasal mucous membranes
- Disturbances of consciousness

AFTER INGESTION:

- Nausea
- Vomiting
- Symptoms similar to those listed under inhalation

AFTER SKIN CONTACT:

ON CONTINUOUS EXPOSURE/CONTACT:

- Dry skin
- Cracking of the skin

AFTER EYE CONTACT:

- Slight irritation

11.5 Chronic effects:

- Contains a substance of group C (MAK-Schwangerschaftsgruppe) (butanone)
- Not listed in mutagenicity class (EC,MAK)

ON CONTINUOUS/REPEATED EXPOSURE/CONTACT:

- Feeling of weakness
- Dry skin
- Tingling/irritation of the skin
- Skin rash/inflammation
- Gastrointestinal complaints

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12. Ecological information:

12.1 Ecotoxicity:

XYLENE, MIXTURE OF ISOMERS:

- LC50 (96 h) : 3.77 mg/l (SALMO GAIRDNERI/ ONCORHYNCHUS MYKISS)
- EC50 (48 h) : 7.4 mg/l (DAPHNIA MAGNA)
- EC50 (72 h) : 10 mg/l (SKELETONEMA COSTATUM)

ETHYLBENZENE:

- LC50 (96 h) : 4.2 mg/l (SALMO GAIRDNERI/ ONCORHYNCHUS MYKISS)
- EC50 (48 h) : 75 mg/l (DAPHNIA MAGNA)
- EC50 (72 h) : 4.6 mg/l (SELENASTRUM CAPRICORNUTUM)

BUTANONE:

- LC50 (96 h) : 3200 mg/l (PIMEPHALES PROMELAS)
- EC50 (48 h) : 5091 mg/l (DAPHNIA MAGNA)
- EC50 (72 h) : 120 mg/l (ALGAE)

12.2 Mobility:

- **Volatile organic compounds (VOC):** 40%
- Insoluble in water

For other physicochemical properties see heading 9

12.3 Persistence and degradability:

- **biodegradation BOD5** : N.D. % ThOD
- **water** : No data available
- **soil** : **T_{1/2}**: N.D. **days**

12.4 Bioaccumulative potential:

- **log Pow** : N.D.
- **BCF** : N.D.

12.5 Other adverse effects:

- **WGK** : 2 (Classification in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS) of 17 May 1999)
- **Effect on the ozone layer** : Not dangerous for the ozone layer (1999/45/EC)
- **Greenhouse effect** : No data available
- **Effect on waste water purification** : No data available

13. Disposal considerations:

13.1 Provisions relating to waste:

- Waste material code (91/689/EEC, Council Decision 2001/118/EC, O.J. L47 of 16/2/2001): 08 04 09* (waste adhesives and sealants containing organic solvents or other dangerous substances)
- Hazardous waste (91/689/EEC)

13.2 Disposal methods:

- Remove to an authorized plant for the destruction, neutralization and elimination of hazardous waste
- Do not discharge into drains or the environment

13.3 Packaging/Container:

- Waste material code packaging (91/689/EEC, Council Decision 2001/118/EC, O.J. L47 of 16/2/2001): 15 01 10* (packaging containing residues of or contaminated by dangerous substances)

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14. Transport information:

| |
|------|
| 33 |
| 1133 |

14.1 Classification of the substance in compliance with UN Recommendations

UN number : 1133
CLASS : 3
SUB RISKS : -
PACKING : III
PROPER SHIPPING NAME :
UN 1133, Adhesives

14.2 ADR (transport by road)

CLASS : 3
PACKING : III
CLASSIFICATION CODE :
DANGER LABEL TANKS : 3
DANGER LABEL PACKAGES : 3

14.3 RID (transport by rail)

CLASS : 3
PACKING : III
CLASSIFICATION CODE :
DANGER LABEL TANKS : 3
DANGER LABEL PACKAGES : 3

14.4 ADNR (transport by inland waterways)

CLASS : 3
PACKING : III
CLASSIFICATION CODE :
DANGER LABEL TANKS : 3
DANGER LABEL PACKAGES : 3

14.5 IMDG (maritime transport)

CLASS : 3
SUB RISKS : -
PACKING : III
MFIAG : -
EMS : F-E, S-D
MARINE POLLUTANT : -

14.6 ICAO (air transport)

CLASS : 3
SUB RISKS : -
PACKING : III
PACKING INSTRUCTIONS PASSENGER AIRCRAFT : 309/Y309
PACKING INSTRUCTIONS CARGO AIRCRAFT : 310

14.7 Special precautions in connection with transport :

viscous liquid with a flashpoint below 23°C, which meets the conditions indicated in 2.2.3.1.4 of ADR, RID and ADNR, in 2.3.2.3 of IMDG and in 3.3.3.1 of ICAO

14.8 Limited quantities (LQ) :

When substances and their packaging meet the conditions established by ADR/RID/ADNR in chapter 3.4, **only** the following prescriptions shall be complied with:

each package shall display a diamond-shaped figure with the following inscription:

- 'UN 1133'

or, in the case of different goods with different identification numbers within a single package:

- the letters 'LQ'

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15.Regulatory information:

Classification according to directives 67/548/EEC and 1999/45/EC



Highly flammable

- R52/53 : Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment
- R66 : Repeated exposure may cause skin dryness or cracking
- R67 : Vapours may cause drowsiness and dizziness
- S(02) : (Keep out of reach of children)
- S09 : Keep container in a well-ventilated place
- S16 : Keep away from sources of ignition - No smoking
- S23 : Do not breathe vapour
- S24 : Avoid contact with skin
- S(46) : (If swallowed, seek medical advice immediately and show this container or label)
- S61 : Avoid release to the environment. Refer to special instructions/safety data sheets.

VERGACOL

16. Other information:

The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

N.A. = NOT APPLICABLE

N.D. = NOT DETERMINED

(*) = INTERNAL CLASSIFICATION (NFPA)

Exposure limits:

TLV : Threshold Limit Value - ACGIH USA 2003
OES : Occupational Exposure Standards - United Kingdom 2003
MEL : Maximum Exposure Limits - United Kingdom 2003
MAK : Maximale Arbeitsplatzkonzentrationen - Germany 2002
TRK : Technische Richtkonzentrationen - Germany 2002
MAC : Maximale aanvaarde concentratie - The Netherlands 2003
VME : Valeurs limites de Moyenne d'Exposition - France 1999
VLE : Valeurs limites d'Exposition à court terme - France 1999
GWBB : Grenswaarde beroepsmatige blootstelling - Belgium 2002
GWK : Grenswaarde kortstondige blootstelling - Belgium 2002
EC : Indicative occupational exposure limit values - directive 2000/39/EC

I : Inhalable fraction = **T**: Total dust = **E**: Einatembarer Aerosolanteil
R : Respirable fraction = **A**: Alveolengängiger Aerosolanteil/Alveolar dust
C : Ceiling limit

| | | |
|-----------------------------|-------------------------------|------------|
| A : aerosol | r : rook/Rauch | (fume) |
| D : damp (vapour) | st : stof/Staub | (dust) |
| Du : dust | ve : vezel | (fibre) |
| fa : Faser (fibre) | va : vapour | |
| fi : fibre | om : oil mist | |
| fu : fume | on : olienevel/Ölnebel | (oil mist) |
| p : poussière (dust) | part : particles | |

Chronic toxicity:

K : List of the carcinogenic substances and processes - The Netherlands 2003

Full text of any R-phrases referred to under heading 2:

R10 : Flammable
R11 : Highly flammable
R20 : Harmful by inhalation
R20/21 : Harmful by inhalation and in contact with skin
R36 : Irritating to eyes
R38 : Irritating to skin
R51/53 : Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R65 : Harmful: may cause lung damage if swallowed
R66 : Repeated exposure may cause skin dryness or cracking
R67 : Vapours may cause drowsiness and dizziness