



## SAFETY DATA SHEET

according to 1907/2006/EG, Article 31

Product: **Refug 100 Component A**

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replaces version: 19.10.20

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### SECTION 1 Designation of the substance or mixture and of the company

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#### 1.1 Product identifier

Trade name: Refug 100 Component A  
UFI: Not applicable for this mixture

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified use: 2-component adhesive / filler / sealant  
Uses advised against: No data available

#### 1.3 Details of the supplier providing the safety data sheet

Manufacturer/supplier:  
Company  
VIALIT ASPHALT GesmbH & Co KG  
Reiterstrasse 78  
A - 5280 Braunau/ Inn

Telephone: +43 (0)7722/ 62977 - 0  
Fax: +43 (0)7722/ 65758

Department providing information: Laboratory department, telephone: +43 (0)7722/ 62977 - 44;  
[Qualitaet@vialit.at](mailto:Qualitaet@vialit.at)

This number is only manned during office hours.

**1.4 Emergency information** For Austria: Poisoning Information Centre, telephone: +43 (0)1/ 4064343

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### SECTION 2 Possible hazards

#### 2.1 Classification according to Regulation 1272/2008/EG (CLP)

Information concerning particular hazards for humans:  
The product is classified as harmless to humans.

Information concerning particular hazards for the environment:  
The product is classified as non-hazardous to the environment.

H-sets: not applicable  
P-sets: not applicable

#### Other information

Full text of the codes, hazard statements and EU hazard statements in SECTION 16.

#### 2.2 Labelling elements (Regulation 1272/2008/EC (CLP))

Labelling not applicable.

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## 2.3 Other hazards

PBT: not applicable.  
vPvB: not applicable.  
Endocrine disrupting properties: not applicable

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## SECTION 3 Composition/ information on ingredients

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### 3.1 Materials

Not applicable, product is a mixture

### 3.2 Mixture

Hazardous ingredients: The product does not contain any quantities of hazardous substances relevant for classification.

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## SECTION 4 First-aid measures

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### 4.1 Description of first aid measures

#### General information:

Always assess the safety of the accident site before attempting to rescue casualties and provide first aid.

#### After inhalation:

Not relevant

#### After contact with skin:

Clean with white spirit, then rinse with soap and water.

#### After contact with eyes:

Rinse with water for a few minutes with the eyelids open.

#### After ingestion:

Consult a doctor if symptoms persist.

#### Self-protection of the first aider:

No special instructions required.

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

None known.

### 4.3 Information on immediate medical assistance or specialised treatment

No information available

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## SECTION 5 Firefighting measures

### 5.1 Extinguishing agent

Suitable extinguishing agents:

Foam, powder, CO<sub>2</sub>

Unsuitable extinguishing agents:

Water

### 5.2 Special hazards arising from the substance or mixture.

Carbon monoxide, carbon dioxide, nitrogen oxides and other hazardous decomposition products may be formed during combustion.

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### **5.3 Instructions for firefighting**

Special firefighting procedures:  
Treat like an oil fire.

Special protective equipment for firefighting:  
Use self-contained breathing apparatus.

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## **SECTION 6 Measures in the event of accidental release**

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### **6.1 Personal precautions, protective equipment and emergency procedures**

Wear gloves to avoid contamination by the bituminous binder.

### **6.2 Environmental protection measures**

Do not allow to enter waterways or drains.

### **6.3 Methods and material for retention and cleaning**

Pick up with wet grit and dispose of.  
Cleaning can be carried out with biodiesel or similar cleaning agents.

### **6.4 Reference to other sections**

See Section 13 for information on disposal.

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## **SECTION 7 Handling and storage**

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### **7.1 Protective measures for safe handling**

Measures for preventing fires:

Keep away from direct sources of ignition.

Measures for preventing aerosol and dust formation:

Not relevant for this product.

Measures for protecting the environment:

Do not allow to enter waterways or drains.

Advice on general hygiene in the workplace:

Keep away from food and drink, do not eat, drink or smoke while working;  
Wash hands before breaks and after work

### **7.2 Conditions for safe storage in consideration of incompatibilities**

Technical measures and storage conditions:  
Dry storage

Packaging materials:  
Original container

Requirements for storage rooms and containers:  
Keep material closed, it hardens in the air.

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Storage instructions:  
No known intolerances.

Storage class:  
10 according to VCI

Substances to be avoided:  
Water causes product to harden prematurely

Further information on storage conditions  
Keep material well sealed.

### 7.3 Specific end uses

Specific use(s): 1.2; no further relevant information available.

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## SECTION 8 Exposure controls / personal protective equipment

### 8.1 Parameters to be monitored

Material name: Bitumen  
CAS no.: 8052-42-4

DNEL values workers  
Long-term exposure - systemic effects:  
Inhalative DNEL 2.88 mg/m<sup>3</sup>

### 8.2 Exposure controls and monitoring

Suitable technical control equipment:  
No special requirements

Personal protective equipment:

Eye protection:	Not required
Skin protection:	Suitable work clothing
Hand protection:	Safety gloves (Nitril)
Respiratory protection:	Not required

Limitation and monitoring of environmental exposure:  
Not applicable

**SECTION 9 Physical and chemical properties**

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**9.1 Information on basic physical and chemical properties**

Aggregate state	viscous
Colour	black
Odour	bitumen
Melting point/freezing point	n/d
Boiling point or start of boiling and boiling range	> 200 °C
Flammability	yes
Lower explosion limit	n/a
Upper explosion limit	n/a
Flash point	> 150 °C
Ignition temperature	n/d
Decomposition temperature	n/a
pH value	n/d
Kinematic viscosity	2500 – 6666.7 mm <sup>2</sup> /s
Solubility	only slightly miscible with water
Partition coefficient n-octanol/water (log value)	n/a
Vapour pressure	n/a
Density and/or relative density	1.15 – 1.2 kg/m <sup>3</sup>
Relative vapour density	n/d
Particle properties	n/a

n/d = not determined      n/a = not applicable

**9.2 Other information**

No further safety-relevant information available

**SECTION 10 Stability and reactivity**

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**10.1 Reactivity**

No hazardous reactions are to be expected if used as intended.

**10.2 Chemical stability**

The product is stable under normal ambient conditions and under the temperature and pressure conditions to be expected during storage and handling.

**10.3 Possibility of hazardous reactions**

No hazardous reactions known if handled as directed.

**10.4 Conditions to avoid**

No conditions known to be avoided if handled as directed.

**10.5 Incompatible materials**

No incompatible materials known, if handled as directed.

**10.6 Hazardous decomposition products**

No hazardous decomposition products known, if handled as directed and moderately heated.

**SECTION 11 Toxicological information**

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**11.1 Information on toxicological effects****Acute toxicity:**

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

**Bitumen:**

Acute oral: LD50 rat  
Dose: > 5,000 mg/kg  
Method: OECD 401  
Test substance: 64741-56-6

Acute inhalative: LC50 rat  
Dose: > 94.4 mg/m3  
Method: OECD 403  
Test substance: Bitumen, vapour aerosol

Acute dermal: LD50 rabbit  
Dose: > 2,000 mg/kg  
Method: OECD 402  
Test substance: 64741-56-6

**Repeated dose toxicity:**

NOAEC inhalative  
Dose: 103.9 mg/m3 (systemic);  
Method: OECD 413  
Test substance: Mixture of 64742-93-4 and 64741-56-6, Form: Aerosol of oxidised bitumen vapour condensate; Based on available data, the product is not classified for specific target organ toxicity at repeated exposure.

NOAEL dermal; dose: >=2000 mg/kg/day (systemic);  
Method: OECD 410, test substance: 64741-56-6, form: semi-solid;

**Corrosive/irritant effect on the skin:**

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

**Severe eye damage/irritation:**

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

**Sensitisation of the respiratory tract/skin:**

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

**Bitumen:**

Sensitisation of the skin Guinea pig  
Result: not sensitising  
Method: OECD 406  
Test substance: 64741-56-6  
Form: semi-solid;

**Germ cell mutagenicity:**

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

**Bitumen:**

Genotoxicity in vitro Ames test  
Result: negative with metabolic activation  
Method: modified Ames test according to ASTM E 1687  
Test substance: 8052-42-4

**Carcinogenicity:**

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

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**Bitumen:**

Carcinogenic effect

rat  
Test substance: Mixture of 64742-93-4 and 64741-56-6  
Method: OECD 451  
Inhalation;  
NOAEC (carcinogenic): > 103.9 mg/m<sup>3</sup>  
Chronic

Mouse  
Test substance: 8052-42-4  
Method: OECD 453  
Dermal  
Result: negative  
Chronic

**Reproductive toxicity:**

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

**Bitumen:**

Reproductive toxicity/fertility:

Test substance: Asphalt, oxidised  
Method: OECD 422  
NOAEC inhalation: 300 mg/m<sup>3</sup> (CSA) Form: Vapour condensate;

Reproductive toxicity/teratogenicity:

Test substance: Asphalt, oxidised  
Method: OECD Guideline 422  
NOAEC; Dose 300 mg/m<sup>3</sup> (subchronic rat) Inhalation; Form: Vapour condensate;

**Specific target organ toxicity at single exposure:**

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

**Specific target organ toxicity with repeated exposure:**

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

**Danger of aspiration:**

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

**11.2 Further information:**

The classification was carried out according to the calculation method of the Preparations Directive.

**SECTION 12 Environmental information****12.1 Toxicity**

No further relevant data available

**Bitumen:**

Acute toxicity in fish:

LL50  
Species: *Oncorhynchus mykiss* (rainbow trout)  
Dose: > 1,000 mg/l  
Exposure time: 96 h  
Test substance: Oxidised bitumen  
Method: QSAR

Acute toxicity to aquatic invertebrates:

LL50  
Species: *Daphnia magna* (large water flea)  
Dose: > 1,000 mg/l  
Exposure time: 48 h  
Test substance: Oxidised bitumen  
Method: QSAR

Toxicity to algae and aquatic plants:

EL50  
Species: *Pseudokirchnerella subcapitata*  
Dose: > 1,000 mg/l  
Exposure time: 72 h  
Test substance: Oxidised bitumen  
Method: (Q)SAR

Toxicity to microorganisms:

LL50  
Species: *Tetrahymena pyriformis*  
Dose: > 1,000 mg/l  
Exposure time: 40 h  
Test substance: Oxidised bitumen  
Method: QSAR

Fish toxicity (chronic toxicity):

LL50  
Species: *Oncorhynchus mykiss* (rainbow trout)  
Dose: > 1,000 mg/l  
Exposure time: 28 h  
Test substance: Oxidised bitumen  
Method: QSARToxicity to daphnia and others  
Aquatic invertebrates (chronic toxicity):NOEL  
Species: *Daphnia magna*  
Dose: > 1,000 mg/l  
Exposure time: 21 h  
Test substance: Oxidised bitumen  
Method: QSAR**12.2 Persistence and degradability****Bitumen**

Not readily biodegradable.

**12.3 Bioaccumulative potential****Bitumen**Bioaccumulation is unlikely due to the high molecular weight.  
Bioaccumulative potential (partition coefficient (n-octanol/water)): no data available**12.4 Mobility in soil**

No further relevant data available

**12.5 Results of the PBT and vPvB assessment**

No further relevant data available



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## **12.6 Endocrine disrupting properties**

No further relevant data available

## **12.6 Other adverse effects**

Water hazard class 1 (according to calculation rule for preparations AwSV)

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## **SECTION 13 Notes on disposal**

Product: Do not dispose of via household waste or sewer, hand over to a hazardous waste collector.

Packaging: Disposal in accordance with official regulations.

Waste code: ÖNORM 2100, code number 54 912  
EN waste catalogue: 17 03 02

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## **SECTION 14 Transport details**

### **14.1 UN number**

Not applicable.

### **14.2 UN proper shipping name**

Not applicable.

### **14.3 Transport hazard classes**

Not applicable.

### **14.4 Packaging group**

Not applicable.

### **14.5 Environmental hazards**

Not applicable.

### **14.6 Special precautions for the user**

Not applicable.

### **14.7 Transport of bulk cargo by sea in accordance with IMO instruments**

Not applicable.

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**SECTION 15 Legal regulations****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulations**

REACH Regulation (EC) No. 1907/2006 as amended  
CLP Regulation (EC) No 1272/2008 as amended  
Water hazard class (Germany): WgK 1 (slightly hazardous to water)

**15.2 Chemical safety assessment**

No chemical safety assessment has been carried out for this product.

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**SECTION 16 Other information**

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The information is based on the current state of knowledge and experience. This data sheet describes products with regard to safety requirements. The information does not have the meaning of a guarantee of properties.

**Clear indication of changes:**

Changes to the previous version are marked with the asterisk \* in the right-hand margin.

**Abbreviations and acronyms**

(Q)SAR = Quantitative structure-activity relationship  
ADN = European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways  
ADR = Agreement on the International Carriage of Dangerous Goods by Road  
AGW = limit value for exposure at the workplace  
ASTM = International Standards Institute  
ATE = acute toxicity estimate  
AwSV = Ordinance on Installations for Handling Substances Hazardous to Water  
BCF = bioconcentration factor  
BGW = biological limit value  
CAS No. = Chemical Abstracts Service Number  
CLP = classification, labelling and packaging  
Classification, labelling and packaging  
CMR = carcinogen, mutagen or reproductive toxin  
CSA = chemical safety assessment  
CSR = chemical safety report  
DMEL = derived exposure level with minimal impairment  
DNEL = derived exposure level without impairment  
EC50 = The effective concentration of a substance that causes 50% of the maximum possible reaction.  
EC number = EINECS and ELINCS number (see also EINECS and ELINCS)  
EINECS = European Inventory of Existing Commercial Substances  
EL50 = effective level 50%  
IATA = International Air Transport Association  
IC50 = inhibitory concentration 50%  
ICAO-TI = Technical Instructions for the Carriage of Dangerous Goods by Air  
IMDG = International Maritime Dangerous Goods Code  
Kow = octanol-water partition coefficient  
Koc = organic soil carbon to water partition coefficient  
LC50 = lethal concentration for 50% of a test population  
LD50 = lethal dose for 50% of a test population (median lethal dose)  
LGK = storage class  
LL50 = lethal load 50%  
LOAEC = lowest concentration with observable adverse effect  
LOAEL = lowest observed adverse effect level  
MAK = maximum workplace concentration  
NOAEC = concentration with no observable adverse effect  
NOAEL = dose with no observable adverse effect  
NOEC = highest exposure concentration of a substance without observed effects  
NOEL = highest dose of a substance with no observed effects  
OECD = Organisation for Economic Co-operation and Development  
PBT = persistent, bioaccumulative and toxic substance  
PEC = estimated effect concentration

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PNEC = estimated no-effect concentration  
RID = Regulations on the International Carriage of Dangerous Goods by Rail  
QSAR = Quantitative/Qualitative Structure-Effect Relationship  
SVHC = substances of very high concern  
STEL = maximum workplace concentration (MAK) - short-term value  
TLV = maximum workplace concentration (MAK)  
TRGS = Technical Rules for Hazardous Substances  
TWA = maximum workplace concentration (MAK) - daily average value  
UVCB = substances with unknown or variable composition, complex reaction products and biological materials  
VCI = German Chemical Industry Association  
vPvB = very persistent and very bioaccumulative

**Important literature references and data sources:**

Information from our suppliers and data from the "Database of registered substances" of the European Chemicals Agency (ECHA) were used to prepare this safety data sheet.

**Methods used for product categorisation:**

The classification for health, physico-chemical and environmental hazards was derived from a combination of calculation methods and, if available, test data.

**Full text of the H & P phrases referred to in items 2 and 3:**

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**Notes on training courses:**

Workers must be regularly trained in the safe handling of the products based on the information in the safety data sheet and the local conditions of the workplace.  
National regulations on the training of employees in the handling of hazardous substances must be observed.