

## 1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name: Silikal RU 320**
- **Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the substance / the preparation:**  
Reaction resin  
Polyurethane resin
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Silikal GmbH  
Ostring 23  
D-63533 Mainhausen  
Tel.: +49-6182/9235-0  
Fax.: +49-6182/9235-40  
e-mail: mail@silikal.de
- **Further information obtainable from:** Environmental department
- **Emergency telephone number:** +49 6182 / 9235-0

## 2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**  
Flam. Liq. 2 H225 Highly flammable liquid and vapour.  
Skin Irrit. 2 H315 Causes skin irritation.  
Skin Sens. 1 H317 May cause an allergic skin reaction.  
STOT SE 3 H335 May cause respiratory irritation.
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**  
Xi; Irritant  
R37/38: Irritating to respiratory system and skin.  
Xi; Sensitising  
R43: May cause sensitisation by skin contact.  
F; Highly flammable  
R11: Highly flammable.
- **Information concerning particular hazards for human and environment:**  
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
- **Classification system:**  
The classification is according to the latest editions of the EU-lists, and extended by company and literature data.
- **Label elements**
- **Labelling according to EU guidelines:**  
The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.
- **Code letter and hazard designation of product:**



Xi Irritant  
F Highly flammable

# Safety data sheet

## according to 1907/2006/EC, Article 31

Printing date 13.11.2013

Vers.No.: 7

Revision: 13.11.2013

**Trade name: Silikal RU 320**

(Contd. of page 1)

- **Hazard-determining components of labelling:**

2-ethylhexyl acrylate  
methyl methacrylate

- **Risk phrases:**

11 Highly flammable.  
37/38 Irritating to respiratory system and skin.  
43 May cause sensitisation by skin contact.

- **Safety phrases:**

3/7 Keep container tightly closed in a cool place.  
9 Keep container in a well-ventilated place.  
16 Keep away from sources of ignition - No smoking.  
24 Avoid contact with skin.  
36/37/39 Wear suitable protective clothing, gloves and eye/face protection.  
60 This material and its container must be disposed of as hazardous waste.

- **Other hazards**

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

### 3 Composition/information on ingredients

- **Chemical characterization: Mixtures**

- **Description:** Mixture of substances listed below with nonhazardous additions.

- **Dangerous components:**

CAS: 103-11-7 EINECS: 203-080-7	2-ethylhexyl acrylate ☒ Xi R37/38; ☒ Xi R43 ⚠ Skin Irrit. 2, H315; Skin Sens. 1, H317; STOT SE 3, H335	25-50%
CAS: 80-62-6 EINECS: 201-297-1	methyl methacrylate ☒ Xi R37/38; ☒ Xi R43; ☒ F R11 ⚠ Flam. Liq. 2, H225; ⚠ Skin Irrit. 2, H315; Skin Sens. 1, H317; STOT SE 3, H335	10-25%

- **Additional information:** For the wording of the listed risk phrases refer to section 16.

### 4 First aid measures

- **Description of first aid measures**

- **After inhalation:**

Supply fresh air and to be sure call for a doctor.  
In case of unconsciousness place patient stably in side position for transportation.

- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.

- **After eye contact:**

Rinse opened eye for several minutes under running water. Then consult a doctor.

- **After swallowing:** If symptoms persist consult doctor.

- **Information for doctor:**

- **Most important symptoms and effects, both acute and delayed**

No further relevant information available.

- **Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

GB

(Contd. on page 3)

# Safety data sheet

## according to 1907/2006/EC, Article 31

Printing date 13.11.2013

Vers.No.: 7

Revision: 13.11.2013

Trade name: Silikal RU 320

(Contd. of page 2)

### 5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
  - Foam
  - Sand
  - CO<sub>2</sub>, sand, extinguishing powder. Do not use water.
- **For safety reasons unsuitable extinguishing agents:**
  - Water
  - Water with full jet
- **Special hazards arising from the substance or mixture**
  - Exothermic polymerization.
  - In case of fire, the following can be released:
    - Hydrocarbons
    - Carbon monoxide and carbon dioxide
    - Nitrogen oxides (NO<sub>x</sub>)
- **Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.
- **Additional information** Cool endangered receptacles with water spray.

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
  - Ensure adequate ventilation
  - Wear protective clothing.
  - Keep away from ignition sources.
  - Use respiratory protective device against the effects of fumes/dust/aerosol.
  - Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
  - Do not allow product to reach sewage system or any water course.
  - Prevent seepage into sewage system, workpits and cellars.
  - Inform respective authorities in case of seepage into water course or sewage system.
  - Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
  - Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders).
  - Ensure adequate ventilation.
  - Do not flush with water or aqueous cleansing agents
- **Reference to other sections**
  - See Section 7 for information on safe handling.
  - See Section 8 for information on personal protection equipment.
  - See Section 13 for disposal information.

### 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
  - Ensure good ventilation/exhaustion at the workplace.
  - Prevent formation of aerosols.
- **Information about fire - and explosion protection:**
  - Fumes can combine with air to form an explosive mixture.
  - Keep ignition sources away - Do not smoke.
  - Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
  - Store only in the original receptacle.

(Contd. on page 4)

# Safety data sheet

## according to 1907/2006/EC, Article 31

Printing date 13.11.2013

Vers.No.: 7

Revision: 13.11.2013

**Trade name: Silikal RU 320**

(Contd. of page 3)

Store in cool, dry conditions in well sealed receptacles.

Do not allow to enter sewers/ surface or ground water.

Store in a cool location.

· **Information about storage in one common storage facility:** Not required.

· **Further information about storage conditions:**

Store receptacle in a well ventilated area.

Keep container tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

· **Maximum storage temperature:** 25 °C

· **Specific end use(s)** No further relevant information available.

### 8 Exposure controls/personal protection

· **Additional information about design of technical facilities:** No further data; see item 7.

· **Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**

#### 80-62-6 methyl methacrylate

WEL	Short-term value: 416 mg/m <sup>3</sup> , 100 ppm
	Long-term value: 208 mg/m <sup>3</sup> , 50 ppm

· **Additional information:** The lists valid during the making were used as basis.

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes and skin.

· **Respiratory protection:**

Use the indicated respiratory protection if workplace exposure limits are exceeded.

· **Recommended filter device for short term use:** Filter A

· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

Nitrile rubber, NBR

Butyl rubber, BR

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**



Tightly sealed goggles

(Contd. on page 5)

# Safety data sheet

## according to 1907/2006/EC, Article 31

Printing date 13.11.2013

Vers.No.: 7

Revision: 13.11.2013

Trade name: Silikal RU 320

(Contd. of page 4)

· **Body protection:** Protective work clothing

### 9 Physical and chemical properties

#### · Information on basic physical and chemical properties

##### · General Information

##### · Appearance:

· <b>Form:</b>	Fluid
· <b>Colour:</b>	Yellowish
· <b>Odour:</b>	Unpleasant
· <b>Odour threshold:</b>	Not determined.

· **pH-value:** Not determined.

##### · Change in condition

· <b>Melting point/Melting range:</b>	Undetermined.
· <b>Boiling point/Boiling range:</b>	100 °C

· **Flash point:** 10 °C· **Flammability (solid, gaseous):** Not applicable.· **Ignition temperature:** 245 °C· **Decomposition temperature:** Not determined.· **Self-igniting:** Product is not selfigniting.· **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

##### · Explosion limits:

· <b>Lower:</b>	0.8 Vol %
· <b>Upper:</b>	12.5 Vol %

· **Vapour pressure at 20 °C:** 38.7 hPa· **Density at 20 °C:** 0.99 g/cm<sup>3</sup>· **Relative density** Not determined.· **Vapour density** Not determined.· **Evaporation rate** Not determined.

##### · Solubility in / Miscibility with water:

Not miscible or difficult to mix.

· **Partition coefficient (n-octanol/water):** Not determined.

##### · Viscosity:

· <b>Dynamic at 20 °C:</b>	350 mPas
· <b>Kinematic:</b>	Not determined.

##### · Solvent content:

· **Organic solvents:** 0.0 %· **Solids content:** 35.1 %· **Other information** No further relevant information available.

### 10 Stability and reactivity

#### · Reactivity

#### · Chemical stability

· **Thermal decomposition / conditions to be avoided:** Keep away from heat and direct sunlight.· **Possibility of hazardous reactions** Exothermic polymerization.

(Contd. on page 6)

# Safety data sheet

## according to 1907/2006/EC, Article 31

Printing date 13.11.2013

Vers.No.: 7

Revision: 13.11.2013

**Trade name: Silikal RU 320**

(Contd. of page 5)

- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** Reacts with peroxides and other radical forming substances.
- **Hazardous decomposition products:**  
Hydrocarbons  
Carbon monoxide and carbon dioxide
- **Additional information:**  
Do not allow product to reach sewage system or any water course.  
Prevent seepage into sewage system, workpits and cellars.  
Inform respective authorities in case of seepage into water course or sewage system.  
Do not allow to enter sewers/ surface or ground water.

### 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** No irritating effect.
- **Sensitization:** Sensitization possible through skin contact.
- **Additional toxicological information:**  
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:  
Irritant

### 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water  
Do not allow product to reach ground water, water course or sewage system.  
Danger to drinking water if even small quantities leak into the ground.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

### 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**  
Must be specially treated adhering to official regulations.  
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:**  
Packaging may be reused or recycled after cleaning.  
Packagings that may not be cleansed are to be disposed of in the same manner as the product.

(Contd. on page 7)

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 13.11.2013

Vers.No.: 7


Revision: 13.11.2013

Trade name: Silikal RU 320

(Contd. of page 6)

· Recommended cleansing agents: Acetone, ethylacetate

## 14 Transport information

· UN-Number · ADR, IMDG, IATA	UN1866
· UN proper shipping name · ADR · IMDG, IATA	1866 RESIN SOLUTION RESIN SOLUTION
· Transport hazard class(es) · ADR, IMDG, IATA	
	
· Class · Label	3 Flammable liquids. 3
· Packing group · ADR, IMDG, IATA	II
· Environmental hazards: · Marine pollutant:	No
· Special precautions for user · Danger code (Kemler): · EMS Number:	Warning: Flammable liquids. 33 F-E,S-E
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR · Limited quantities (LQ) · Transport category · Tunnel restriction code	5L 2 D/E
· UN "Model Regulation":	UN1866, RESIN SOLUTION, 3, II

## 15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- Labelling according to EU guidelines:  
The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.
- Code letter and hazard designation of product:



Xi Irritant  
F Highly flammable

- Hazard-determining components of labelling:  
2-ethylhexyl acrylate

(Contd. on page 8)

# Safety data sheet

## according to 1907/2006/EC, Article 31

Printing date 13.11.2013

Vers.No.: 7

Revision: 13.11.2013

**Trade name: Silikal RU 320**

(Contd. of page 7)

methyl methacrylate

**· Risk phrases:**

- 11 Highly flammable.
- 37/38 Irritating to respiratory system and skin.
- 43 May cause sensitisation by skin contact.

**· Safety phrases:**

- 3/7 Keep container tightly closed in a cool place.
- 9 Keep container in a well-ventilated place.
- 16 Keep away from sources of ignition - No smoking.
- 24 Avoid contact with skin.
- 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
- 60 This material and its container must be disposed of as hazardous waste.

**· National regulations:**
**· Technical instructions (air):**

Class	Share in %
NK	10-25

- **Waterhazard class:** Water hazard class 2 (Self-assessment): hazardous for water.
- **Chemical safety assessment:** A Chemical Safety Assessment has been carried out.

**16 Other information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

**· Relevant phrases**

- H225 Highly flammable liquid and vapour.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H335 May cause respiratory irritation.
- R11 Highly flammable.
- R37/38 Irritating to respiratory system and skin.
- R43 May cause sensitisation by skin contact.

- **Department issuing MSDS:** Environmental Department
- **\* Data compared to the previous version altered.**

GB