

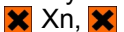


## 1 Identification of substance

- **Product details**
- **Trade name:** SILIKAL RE 77 Comp. B
- **Article number:** RE 77-B
- **Application of the substance / the preparation:**  
Epoxy resin  
Hardening agent/ Curing agent
- **Manufacturer/Supplier:**  
Silikal America  
609-B Fertilla Street  
Carrollton, GA 30117  
Tel.: 770.830.1404  
Fax.: 777.830.9213  
info@silikalamerica.com
- **Information department:** Silikal America
- **Emergency information:** INFOTRAC 1-800-535-5053

## 2 Composition/Data on components

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

### · Dangerous components:

100-51-6	Benzyl alcohol  Xn, Xi; R 20/22-43	25-50%
2855-13-2	3-aminomethyl-3,5,5-trimethylcyclohexylamine  C, Xn; R 21/22-34-43-52/53	10-25%
68889-71-4	Octahydro-4,7-methano-1H-inden-dimethanamin  C, Xn; R 21/22-34-43	2.5-5%

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

## 3 Hazards identification

- **Hazard description:**



C Corrosive

- **Information pertaining to particular dangers for man 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.

R 20/21/22 Harmful by inhalation, in contact with skin and if swallowed.

R 34 Causes burns.

R 43 May cause sensitisation by skin contact.

R 52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

- **Classification system:**

The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

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## · NFPA ratings (scale 0 - 4)



Health = 3  
Fire = 1  
Reactivity = 0

## · HMIS-ratings (scale 0 - 4)



Health = 3  
Fire = 1  
Reactivity = 0

## 4 First aid measures

- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:** Supply fresh air and to be sure call for a doctor.
- **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:**  
Drink copious amounts of water and provide fresh air. Immediately call a doctor.  
Do not induce vomiting; immediately call for medical help.

## 5 Fire fighting measures

- **Suitable extinguishing agents:**  
Water  
Foam  
Fire-extinguishing powder  
Carbon dioxide
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards caused by the material, its products of combustion or resulting gases:**  
Formation of toxic gases is possible during heating or in case of fire.  
In case of fire, the following can be released:  
Carbon monoxide (CO)  
Nitrogen oxides (NO<sub>x</sub>)
- **Protective equipment:**  
Wear self-contained respiratory protective device.  
Wear fully protective suit.
- **Additional information**  
Collect contaminated fire fighting water separately. It must not enter the sewage system.  
Cool endangered receptacles with water spray.

## 6 Accidental release measures

- **Person-related safety precautions:**  
Ensure adequate ventilation  
Wear protective equipment. Keep unprotected persons away.
- **Measures for environmental protection:**  
Inform respective authorities in case of seepage into water course or sewage system.  
Do not allow to enter sewers/ surface or ground water.
- **Measures for cleaning/collecting:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.

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Do not flush with water or aqueous cleansing agents

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## 7 Handling and storage

- **Handling:**
- **Information for safe handling:** Ensure good ventilation/exhaustion at the workplace.
- **Information about protection against explosions and fires:**
  - Keep ignition sources away - Do not smoke.
  - Protect against electrostatic charges.
  - Fumes can combine with air to form an explosive mixture.
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
  - Store only in the original receptacle.
  - Store in cool, dry conditions in well sealed receptacles.
  - Do not allow to enter sewers/ surface or ground water.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
  - Store receptacle in a well ventilated area.
  - Protect from heat and direct sunlight.
- **Maximum storage temperature:** 25°C

## 8 Exposure controls and personal protection

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

- **Components with limit values that require monitoring at the workplace:**

100-51-6 Benzyl alcohol

WEEL | 44 mg/m<sup>3</sup>, 10 ppm

- **Additional information:** The lists that were valid during the creation were used as basis.
- **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.
  - Avoid contact with the eyes and skin.
  - Use skin protection cream for skin protection.
- **Breathing equipment:**
  - Use suitable respiratory protective device only when aerosol or mist is formed.
- **Protection of hands:**



Protective gloves

- **Material of gloves**
  - Butyl rubber, BR
  - Nitrile rubber, NBR
- **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.

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## · Eye protection:



Tightly sealed goggles

## · Body protection: Protective work clothing

## 9 Physical and chemical properties

## · General Information

Form:	Fluid
Color:	Yellow tint
Odor:	Characteristic

## · Change in condition

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	205°C (401°F)

· Flash point: 101°C (214°F)

· Ignition temperature: 435°C (815°F)

· Auto igniting: Product is not selfigniting.

· Danger of explosion: Product does not present an explosion hazard.

## · Explosion limits:

Lower:	1.3 Vol %
Upper:	13.0 Vol %

· Vapor pressure at 20°C (68°F): 0.1 hPa

· Density at 20°C (68°F): 1.02 g/cm<sup>3</sup>

## · Solubility in / Miscibility with

Water: Not miscible or difficult to mix.

· pH-value at 20°C (68°F): 11

## · Viscosity:

Dynamic at 20°C (68°F): 250 mPas

## · Solvent content:

Organic solvents: 45.0 %

Solids content: 55.0 %

## 10 Stability and reactivity

## · Thermal decomposition / conditions to be avoided:

No decomposition if used according to specifications.

· Materials to be avoided: Reacts with alkali, amines and strong acids.

· Dangerous reactions: Strong exothermic reaction with acids.

## · Dangerous products of decomposition:

Ammonia

Corrosive gases/vapors

## · Additional information:

Inform respective authorities in case of seepage into water course or sewage system.

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

## 11 Toxicological information

- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

**100-51-6 Benzyl alcohol**

Oral	LD50	1230 mg/kg (rat)
Dermal	LD50	2000 mg/kg (rbt)

**2855-13-2 3-aminomethyl-3,5,5-trimethylcyclohexylamine**

Oral	LC50	1030 mg/l (rat)
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**68889-71-4 Octahydro-4.7-methano-1H-inden-dimethanamin**

Oral	LD50	502 mg/kg (rat)
Dermal	LD50	400-500 mg/kg (rat)

- **Primary irritant effect:**

- **on the skin:** Caustic effect on skin and mucous membranes.

- **on the eye:** Strong caustic effect.

- **Sensitization:** Sensitization possible through skin contact.

- **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

Harmful

Corrosive

Irritant

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

## 12 Ecological information

- **Ecotoxic effects:**

- **Remark:** Harmful to fish

- **Additional ecological information:**

- **General notes:**

Water hazard class 2 (Self-assessment): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

Must not reach bodies of water or drainage ditch undiluted or unneutralized.

Danger to drinking water if even small quantities leak into the ground.

The material is harmful to the environment.

Harmful to aquatic organisms

## 13 Disposal considerations

- **Product:**

- **Recommendation:**

Must be specially treated adhering to official regulations.

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

- **Uncleaned packagings:**

- **Recommendation:**

Packaging can be reused or recycled after cleaning.

Packagings that cannot be cleansed are to be disposed of in the same manner as the product.

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- Recommended cleansing agent:  
Alcohol  
Acetone

## 14 Transport information

- DOT regulations:



- Hazard class: 8
- Identification number: UN2735
- Packing group: III
- Proper shipping name (technical name): AMINES, LIQUID, CORROSIVE, N.O.S. (ISOPHORONEDIAMINE)
- Label: 8

- Land transport ADR/RID (cross-border):



- ADR/RID class: 8 Corrosive substances
- Danger code (Kemler): 80
- UN-Number: 2735
- Packaging group: III
- Description of goods: 2735 AMINES, LIQUID, CORROSIVE, N.O.S. (ISOPHORONEDIAMINE)

- Maritime transport IMDG:



- IMDG Class: 8
- UN Number: 2735
- Label: 8
- Packaging group: III
- EMS Number: F-A,S-B
- Marine pollutant: No
- Segregation groups: Alkalis
- Proper shipping name: AMINES, LIQUID, CORROSIVE, N.O.S. (ISOPHORONEDIAMINE)

- Air transport ICAO-TI and IATA-DGR:



- ICAO/IATA Class: 8
- UN/ID Number: 2735
- Label: 8
- Packaging group: III

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· **Propper shipping name:** AMINES, LIQUID, CORROSIVE, N.O.S.  
(ISOPHORONEDIAMINE)

## 15 Regulations

### · Sara

#### · **Section 355 (extremely hazardous substances):**

None of the ingredient is listed.

#### · **Section 313 (Specific toxic chemical listings):**

None of the ingredients is listed.

#### · **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

### · **Proposition 65**

#### · **Chemicals known to cause cancer:**

None of the ingredients is listed.

#### · **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

#### · **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

#### · **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

### · **Carcinogeny categories**

#### · **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

#### · **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

#### · **NTP (National Toxicology Program)**

None of the ingredients is listed.

#### · **TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients is listed.

#### · **MAK (German Maximum Workplace Concentration)**

None of the ingredients is listed.

#### · **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

#### · **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

#### · **AGW (German Workplace Threshold Value)**

None of the ingredients is listed.

### · **Product related hazard informations:**

The product has been classified and marked in accordance with directives on hazardous materials.

### · **Hazard symbols:**

C Corrosive

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

Benzyl alcohol

3-aminomethyl-3,5,5-trimethylcyclohexylamine

Octahydro-4.7-methano-1H-inden-dimethanamin

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· **Risk phrases:**

- 20/21/22 Harmful by inhalation, in contact with skin and if swallowed.  
 34 Causes burns.  
 43 May cause sensitisation by skin contact.  
 52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

· **Safety phrases:**

- 9 Keep container in a well-ventilated place.  
 20 When using do not eat or drink.  
 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.  
 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).  
 61 Avoid release to the environment. Refer to special instructions/safety data sheets.

· **National regulations:**

· **Technical instructions (air):**

Class	Share in %
II	25-50

- **Water hazard class:** Water hazard class 2 (Self-assessment): hazardous for water.

## 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.

- **Department issuing MSDS:** Silikal America  
 · **\* Data compared to the previous version altered.**

USA