



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

- **Product identifier**
- **Trade name: SILIKAL RE 55 Component A**
- **Article number: RE 55-A**
- **Relevant identified uses of the substance or mixture and uses advised against**
- **Application of the substance / the preparation: Epoxy 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 Directive 67/548/EEC or Directive 1999/45/EC**
Xi; Irritant
R36/38: Irritating to eyes and skin.
Xi; Sensitising
R43: May cause sensitisation by skin contact.
N; Dangerous for the environment
R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- **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
N Dangerous for the environment
- **Hazard-determining components of labelling:**
reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight = 700)
oxirane, mono[(C12-14-alkyloxy)methyl] derivs
reaction product: bisphenol-F-(epichlorhydrin) epoxy resin (number average molecular weight = 700)
- **Risk phrases:**
36/38 Irritating to eyes and skin.

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- 43 May cause sensitisation by skin contact.
51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety phrases:

- 23 Do not breathe fumes/aerosol.
24 Avoid contact with skin.
26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
28 After contact with skin, wash immediately with plenty of soap and water.
37/39 Wear suitable gloves and eye/face protection.
57 Use appropriate container to avoid environmental contamination.

Special labelling of certain preparations:

Contains epoxy constituents. See information supplied by the manufacturer.

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: 25068-38-6 NLP: 500-033-5	reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight = 700) 	50-100%
CAS: 68609-97-2 EINECS: 271-846-8	oxirane, mono[(C12-14-alkyloxy)methyl] derivs 	10-25%
CAS: 9003-36-5	reaction product: bisphenol-F-(epichlorhydrin) epoxy resin (number average molecular weight = 700) 	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

· **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:

If skin irritation continues, consult a doctor.

Immediately wash with water and soap and rinse thoroughly.

After eye contact:

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

After swallowing:

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; call for medical help immediately.

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.

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5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
 - Water
 - Foam
 - Carbon dioxide
 - Fire-extinguishing powder
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture**
 - Formation of toxic gases is possible during heating or in case of fire.
- **Advice for firefighters**
- **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

- **Personal precautions, protective equipment and emergency procedures**
 - Ensure adequate ventilation
 - Wear protective clothing.
 - Use respiratory protective device against the effects of fumes/dust/aerosol.
- **Environmental precautions:**
 - 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).
 - Dispose contaminated material as waste according to item 13.
 - 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.
- **Information about fire - and explosion protection:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **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

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· **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:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

· **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.

Avoid contact with the eyes and skin.

· **Respiratory protection:**

Use suitable respiratory protective device only when aerosol or mist is formed.

· **Protection of hands:**

Protective gloves

· **Material of gloves**Recommended thickness of the material: ≥ 0.4 mm

Butyl rubber, BR

Nitrile rubber, NBR

· **Penetration time of glove material**

For the mixture mentioned below the penetration time has to be at least 480 minutes (Permeation according to EN 374 Part 3: Level 6).

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

· **Body protection:** Protective work clothing

9 Physical and chemical properties

· **Information on basic physical and chemical properties**· **General Information**· **Appearance:****Form:** Fluid**Colour:** Yellowish· **Odour:** Characteristic· **Odour threshold:** Not determined.· **pH-value:** Not determined.· **Change in condition****Melting point/Melting range:** Undetermined.

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Boiling point/Boiling range:	> 200°C
· Flash point:	> 150°C
· Flammability (solid, gaseous):	Not applicable.
· Ignition temperature:	> 200°C
· Decomposition temperature:	Not determined.
· Self-igniting:	Product is not selfigniting.
· Danger of explosion:	Product does not present an explosion hazard.
· Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
· Vapour pressure:	Not determined.
· Density at 20°C:	1.1 g/cm ³
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with water:	Not miscible or difficult to mix.
· Segregation coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic at 20°C:	900 mPas
Kinematic:	Not determined.
· Solvent content:	
Solids content:	>99 %
· 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.
No decomposition if used according to specifications.
- **Possibility of hazardous reactions**
Reacts with amines.
Exothermic polymerization.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** Reacts with alkali, amines and strong acids.
- **Hazardous decomposition products:** No dangerous decomposition products known.
- **Additional information:**
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.

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11 Toxicological information

- **Information on toxicological effects**

- **Acute toxicity:**

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

25068-38-6 reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight = 700)

Oral	LD50	>5000 mg/kg (rat)
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Dermal	LD50	>2000 mg/kg (rat)
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- **Primary irritant effect:**

- **on the skin:** Irritant to skin and mucous membranes.

- **on the eye:** 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:**

25068-38-6 reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight = 700)

EC50 (48h)	10 mg/l (Daphnia magna)
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LC50 (96h)	10 mg/l (fish)
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- **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.

- **Ecotoxicological effects:**

- **Remark:** Toxic for fish

- **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.

Also poisonous for fish and plankton in water bodies.

The material is harmful to the environment.

Toxic for aquatic organisms

- **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.

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· European waste catalogue	
08 01 11*	waste paint and varnish containing organic solvents or other dangerous substances
15 01 04	metallic packaging

· **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.

14 Transport information

· **UN-Number**· **ADR, IMDG, IATA**

UN3082

· **ADN**

Void

· **UN proper shipping name**· **ADR**

3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight = 700), reaction product: bisphenol-F-(epichlorhydrin) epoxy resin (number average molecular weight = 700))

· **ADN**

Void

· **IMDG, IATA**

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight = 700), reaction product: bisphenol-F-(epichlorhydrin) epoxy resin (number average molecular weight = 700))

· **Transport hazard class(es)**· **ADR, IATA**· **Class**

9 Miscellaneous dangerous substances and articles.

· **Label**

9

· **ADN/R Class:**

Void

· **IMDG**· **Class**

9 Miscellaneous dangerous substances and articles.

· **Label**

9

· **Packing group**· **ADR, IMDG, IATA**

III

· **Environmental hazards:**

Product contains environmentally hazardous substances: reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight = 700)

· **Marine pollutant:**

No

· **Special marking (ADR):**

Symbol (fish and tree)

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· Special marking (IATA):	Symbol (fish and tree)
· Special precautions for user	Warning: Miscellaneous dangerous substances and articles.
· Danger code (Kemler):	90
· EMS Number:	F-A,S-F
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	

· ADR	
· Tunnel restriction code	E

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
N Dangerous for the environment

- **Hazard-determining components of labelling:**
reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight = 700)
oxirane, mono[(C12-14-alkyloxy)methyl] derivs
reaction product: bisphenol-F-(epichlorhydrin) epoxy resin (number average molecular weight = 700)
- **Risk phrases:**
36/38 Irritating to eyes and skin.
43 May cause sensitisation by skin contact.
51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- **Safety phrases:**
23 Do not breathe fumes/aerosol.
24 Avoid contact with skin.
26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
28 After contact with skin, wash immediately with plenty of soap and water.
37/39 Wear suitable gloves and eye/face protection.
57 Use appropriate container to avoid environmental contamination.
- **Special labelling of certain preparations:**
Contains epoxy constituents. See information supplied by the manufacturer.
- **National regulations:**
- **Waterhazard class:** Water hazard class 2 (Self-assessment): hazardous for water.
- **Chemical safety assessment:** A Chemical Safety Assessment has been carried out.

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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**

R36/38 Irritating to eyes and skin.

R38 Irritating to skin.

R43 May cause sensitisation by skin contact.

R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

· **Department issuing MSDS:** Environmental Department

· * **Data compared to the previous version altered.**

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