

Safety data sheet
According to 91/155 EEC

Printing date 02.05.2011

Revision: 02.05.2011












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

- **Product identifier**
- **Trade name:** Resin solution X 50
- **Article number:** 1234567890
- **Application of the substance / the preparation** Raw material for resins
- **Details of the supplier of the safety data sheet**
Chemix GmbH
Chemixstraße 17
A-5020 Salzburg Tel.: 0043/662/21 22 23
- **Further information obtainable from:**
Product safety department.
Email address of the competent person: peter.mayer@chemix.com
- **Emergency telephone number:**
During normal opening times (8 am till 5:30 pm): environment protection department, Ext 123
at other times: factory fire brigade, Ext 222

2 Composition/information on ingredients

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


· **Dangerous components:**

25068-38-6	reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight \approx 700)  Xi R36/38;  Xi R43;  N R51/53	25-50%
108-88-3	toluene  Xn R48/20-63-65;  Xi R38;  F R11 R67 Repr. Cat. 3	10-25%
141-78-6	ethyl acetate  Xi R36;  F R11 R66-67	10-25%
78-92-2	butanol  Xi R36/37 R10-67	2,5-10%
67-63-0	propan-2-ol  Xi R36;  F R11 R67	2,5-10%

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

3 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**

 Xn; Harmful

R48/20-63-65: Harmful: danger of serious damage to health by prolonged exposure through inhalation. Possible risk of harm to the unborn child. Harmful: may cause lung damage if swallowed.

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 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.

R10-67: Flammable. Vapours may cause drowsiness and dizziness.

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:

Xn Harmful

N Dangerous for the environment

Hazard-determining components of labelling:

reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight \approx 700)
toluene

Risk phrases:

10 Flammable.

36/38 Irritating to eyes and skin.

43 May cause sensitisation by skin contact.

48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.

51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

63 Possible risk of harm to the unborn child.

65 Harmful: may cause lung damage if swallowed.

67 Vapours may cause drowsiness and dizziness.

Safety phrases:

2 Keep out of the reach of children.

24/25 Avoid contact with skin and eyes.

29/56 Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point.

37/39 Wear suitable gloves and eye/face protection.

46 If swallowed, seek medical advice immediately and show this container or label.

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- **Special labelling of certain preparations:**
Contains epoxy constituents. See information supplied by the manufacturer.

4 First aid measures

- **General information:**
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **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. If symptoms persist, consult a doctor.
- **After swallowing:** If symptoms persist consult doctor.

5 Firefighting measures

- **Suitable extinguishing agents:** CO₂, sand, extinguishing powder. Do not use water.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
Do not allow product to reach sewage system or any water course.
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, sawdust).
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.
Prevent formation of aerosols.

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- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.
- **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.

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

108-88-3 toluene

PEL (USA)	Short-term value: C 300; 500* ppm Long-term value: 200 ppm *10-min peak per 8-hr shift
REL (USA)	Short-term value: 560 mg/m ³ , 150 ppm Long-term value: 375 mg/m ³ , 100 ppm
TLV (USA)	75 mg/m ³ , 20 ppm
NIC-BEI	

141-78-6 ethyl acetate

PEL (USA)	1400 mg/m ³ , 400 ppm
REL (USA)	1400 mg/m ³ , 400 ppm
TLV (USA)	1440 mg/m ³ , 400 ppm

78-92-2 butanol

PEL (USA)	450 mg/m ³ , 150 ppm
REL (USA)	Short-term value: 455 mg/m ³ , 150 ppm Long-term value: 305 mg/m ³ , 100 ppm
TLV (USA)	300 mg/m ³ , 100 ppm

67-63-0 propan-2-ol

PEL (USA)	980 mg/m ³ , 400 ppm
REL (USA)	Short-term value: 1225 mg/m ³ , 500 ppm Long-term value: 980 mg/m ³ , 400 ppm
TLV (USA)	Short-term value: 984 mg/m ³ , 400 ppm Long-term value: 492 mg/m ³ , 200 ppm BEI

- **Additional information:** The lists valid during the making 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.
- **Respiratory protection:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

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· Protection of hands:


Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

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

· Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· 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

9 Physical and chemical properties

· General Information
· Appearance:

Form: Fluid
Colour: According to product specification

· Odour: Characteristic

· Odour threshold: Not determined.

· pH-value: Not determined.

· Change in condition

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: 77°C

· Flash point: 26°C

· Flammability (solid, gaseous): Not applicable.

· Ignition temperature: 390°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.

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· Explosion limits:	
Lower:	1,2 Vol %
Upper:	11,5 Vol %
· Vapour pressure at 20°C: 97 hPa	
· Density: Not determined.	
· 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:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	50,0 %
VOC (EC)	50,00 %
· Solids content: 50,0 %	
· Other information: No further relevant information available.	

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

· **Acute toxicity:**

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

108-88-3 toluene

Oral	LD50	5000 mg/kg (rat)
Dermal	LD50	12124 mg/kg (rabbit)
Inhalative	LC50/4 h	5320 mg/l (mouse)

- **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:

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Irritant

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12 Ecological information

- **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.
- **Ecotoxic 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.
Toxic for aquatic organisms

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

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



- **ADR/RID class:** 3 Flammable liquids.
- **Danger code (Kemler):** 30
- **UN-Number:** 1866
- **Packaging group:** III
- **Hazard label:** 3
- **Special marking:** Symbol (fish and tree)
- **UN proper shipping name:** 1866 RESIN SOLUTION, special provision 640E, ENVIRONMENTALLY HAZARDOUS

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· **Tunnel restriction code** D/E· **Maritime transport IMDG:**

· **IMDG Class:** 3
· **UN Number:** 1866
· **Label** 3
· **Packaging group:** III
· **EMS Number:** F-E,S-E
· **Marine pollutant:** Yes
Symbol (fish and tree)

· **Proper shipping name:** RESIN SOLUTION (reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight £ 700))

· **Air transport ICAO-TI and IATA-DGR:**

· **ICAO/IATA Class:** 3
· **UN/ID Number:** 1866
· **Label** 3
· **Packaging group:** III
· **Proper shipping name:** RESIN SOLUTION

· **Environmental hazards:**

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

15 Regulatory information

· **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:**

Xn Harmful
N Dangerous for the environment

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

reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight £ 700)
toluene

· **Risk phrases:**

10 Flammable.
36/38 Irritating to eyes and skin.

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- 43 *May cause sensitisation by skin contact.*
48/20 *Harmful: danger of serious damage to health by prolonged exposure through inhalation.*
51/53 *Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.*
63 *Possible risk of harm to the unborn child.*
65 *Harmful: may cause lung damage if swallowed.*
67 *Vapours may cause drowsiness and dizziness.*
- **Safety phrases:**
2 *Keep out of the reach of children.*
24/25 *Avoid contact with skin and eyes.*
29/56 *Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point.*
37/39 *Wear suitable gloves and eye/face protection.*
46 *If swallowed, seek medical advice immediately and show this container or label.*
- **Special labelling of certain preparations:**
Contains epoxy constituents. See information supplied by the manufacturer.

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**
R10 *Flammable.*
R11 *Highly flammable.*
R36 *Irritating to eyes.*
R36/37 *Irritating to eyes and respiratory system.*
R36/38 *Irritating to eyes and skin.*
R38 *Irritating to skin.*
R43 *May cause sensitisation by skin contact.*
R48/20 *Harmful: danger of serious damage to health by prolonged exposure through inhalation.*
R51/53 *Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.*
R63 *Possible risk of harm to the unborn child.*
R65 *Harmful: may cause lung damage if swallowed.*
R66 *Repeated exposure may cause skin dryness or cracking.*
R67 *Vapours may cause drowsiness and dizziness.*