

Safety Data Sheet

in accordance with SANS

Printing date 24.08.2017

Version number 1.0

Revision: 23.08.2017

1 Identification of the substance or mixture and of the supplier

- **Product identifier**
- **Trade name:** *Resin solution X 50*
- **Article number:** *1234567890*
- **Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture** *Raw material for resins*
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Chemix GmbH
Chemixstrasse 2
5020 Salzburg
- **Further information obtainable from:** *Product safety department.*
- **Emergency telephone number:** *123 456 789*

Tel.:0043/662/212223

2 Hazards identification

- **Classification of the substance or mixture**



Flam. Liq. 3 *H226 Flammable liquid and vapour.*



Repr. 2 *H361 Suspected of damaging fertility or the unborn child.*
STOT RE 2 *H373 May cause damage to organs through prolonged or repeated exposure.*
Asp. Tox. 1 *H304 May be fatal if swallowed and enters airways.*



Aquatic Chronic 2 *H411 Toxic to aquatic life with long lasting effects.*



Skin Irrit. 2 *H315 Causes skin irritation.*
Eye Irrit. 2A *H319 Causes serious eye irritation.*
Skin Sens. 1 *H317 May cause an allergic skin reaction.*
STOT SE 3 *H336 May cause drowsiness or dizziness.*
Acute Tox. 5 *H333 May be harmful if inhaled.*

- **Label elements**

- **GHS label elements** *The product is classified and labelled according to the Globally Harmonised System (GHS).*

(Contd. on page 2)

Safety Data Sheet

in accordance with SANS

Printing date 24.08.2017

Version number 1.0

Revision: 23.08.2017

Trade name: *Resin solution X 50*

(Contd. of page 1)

· Hazard pictograms



GHS02 GHS07 GHS08 GHS09

· Signal word *Danger*

· Hazard-determining components of labelling:

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

· Hazard statements

Flammable liquid and vapour.

May be harmful if inhaled.

Causes skin irritation.

Causes serious eye irritation.

May cause an allergic skin reaction.

Suspected of damaging fertility or the unborn child.

May cause drowsiness or dizziness.

May cause damage to organs through prolonged or repeated exposure.

May be fatal if swallowed and enters airways.

Toxic to aquatic life with long lasting effects.

· Precautionary statements

If medical advice is needed, have product container or label at hand.

Keep out of reach of children.

Read label before use.

Keep away from heat/sparks/open flames/hot surfaces. No smoking.

IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· Other hazards

· Results of PBT and vPvB assessment

· **PBT:** *Not applicable.*

· **vPvB:** *Not applicable.*

3 Composition/information on ingredients

· Chemical characterisation: **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 ≤ 700)	25 - 50%
	Aquatic Chronic 2, H411 Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Skin Sens. 1, H317	

(Contd. on page 3)

Safety Data Sheet

in accordance with SANS

Printing date 24.08.2017

Version number 1.0

Revision: 23.08.2017

Trade name: **Resin solution X 50**

(Contd. of page 2)

108-88-3	toluene ⚠ Flam. Liq. 2, H225 ⚠ Repr. 2, H361; STOT RE 2, H373; Asp. Tox. 1, H304 ⚠ Skin Irrit. 2, H315; STOT SE 3, H336 Acute Tox. 5, H303	10 - 25%
141-78-6	ethyl acetate ⚠ Flam. Liq. 2, H225 ⚠ Eye Irrit. 2A, H319; STOT SE 3, H336 Acute Tox. 5, H333	10 - 25%
78-92-2	butanol ⚠ Flam. Liq. 3, H226 ⚠ Eye Irrit. 2A, H319; STOT SE 3, H335-H336	2.5 - 10%
67-63-0	propan-2-ol ⚠ Flam. Liq. 2, H225 ⚠ Eye Irrit. 2A, H319; STOT SE 3, H336 Acute Tox. 5, H333	2.5 - 10%

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

4 First aid measures

- **Description of 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.
- **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.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.

(Contd. on page 4)

ZA

Safety Data Sheet

in accordance with SANS

Printing date 24.08.2017

Version number 1.0

Revision: 23.08.2017

Trade name: *Resin solution X 50*

(Contd. of page 3)

- **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, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.*
- **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** *No special precautions are necessary if used correctly.*
- **Information about fire - and explosion protection:**
*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:** *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.*
- **Control parameters**

· Ingredients with limit values that require monitoring at the workplace:	
108-88-3 toluene	
OEL (South Africa)	Short-term value: 560 mg/m ³ , 150 ppm Long-term value: 188 mg/m ³ , 50 ppm Sk
141-78-6 ethyl acetate	
OEL (South Africa)	Long-term value: 700 mg/m ³ , 200 ppm
IOELV (EU)	Short-term value: 1468 mg/m ³ , 400 ppm Long-term value: 734 mg/m ³ , 200 ppm
78-92-2 butanol	
OEL (South Africa)	Short-term value: 450 mg/m ³ , 150 ppm Long-term value: 300 mg/m ³ , 100 ppm
67-63-0 propan-2-ol	
OEL (South Africa)	Short-term value: 1225 mg/m ³ , 500 ppm Long-term value: 980 mg/m ³ , 400 ppm

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

(Contd. on page 5)

Safety Data Sheet

in accordance with SANS

Printing date 24.08.2017

Version number 1.0

Revision: 23.08.2017

Trade name: *Resin solution X 50*

(Contd. of page 4)

- **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.

Store protective clothing separately.

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.

- **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

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

- **General Information**

- **Appearance:**

Form: *Liquid*

Colour: *According to product specification*

- **Odour:** *Characteristic*

- **Odour threshold:** *Not determined.*

- **pH-value:** *Not determined.*

- **Change in condition**

Melting point/freezing point: *Undetermined.*

Initial boiling point and boiling range: *77 - 78°C*

- **Flash point:** *26°C*

- **Flammability (solid, gas):** *Not applicable.*

(Contd. on page 6)

ZA

Safety Data Sheet

in accordance with SANS

Printing date 24.08.2017

Version number 1.0

Revision: 23.08.2017

Trade name: *Resin solution X 50*

(Contd. of page 5)

· Ignition temperature:	390°C
· Decomposition temperature:	<i>Not determined.</i>
· Auto-ignition temperature:	<i>Product is not selfigniting.</i>
· Explosive properties:	<i>Product is not explosive. However, formation of explosive air/vapour mixtures are possible.</i>
· Explosion limits:	
Lower:	1.2Vol %
Upper:	12Vol %
· Vapour pressure at 20°C:	97hPa
· Density:	<i>Not determined.</i>
· Relative density	<i>Not determined.</i>
· Vapour density	<i>Not determined.</i>
· Evaporation rate	<i>Not determined.</i>
· Solubility in / Miscibility with water:	<i>Not miscible or difficult to mix.</i>
· Partition coefficient: n-octanol/water:	<i>Not determined.</i>
· Viscosity:	
Dynamic:	<i>Not determined.</i>
Kinematic:	<i>Not determined.</i>
· Solvent content:	
Organic solvents:	66.0%
Water:	4.0%
VOC (EC)	66.00 %
Solids content:	50.0%
· Other information	<i>No further relevant information available.</i>

10 Stability and reactivity

- **Reactivity** *No further relevant information available.*
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** *No decomposition if used according to specifications.*
- **Possibility of hazardous reactions** *No dangerous reactions known.*
- **Conditions to avoid** *No further relevant information available.*
- **Incompatible materials:** *No further relevant information available.*
- **Hazardous decomposition products:** *No dangerous decomposition products known.*

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity**

· LD/LC50 values relevant for classification:		
<i>108-88-3 toluene</i>		
<i>Oral</i>	<i>LD50</i>	<i>5,000 mg/kg (rat)</i>
<i>Dermal</i>	<i>LD50</i>	<i>12,124 mg/kg (rabbit)</i>

(Contd. on page 7)

Safety Data Sheet

in accordance with SANS

Printing date 24.08.2017

Version number 1.0

Revision: 23.08.2017

Trade name: *Resin solution X 50*

(Contd. of page 6)

<i>Inhalative</i>	<i>LC50/4 h</i>	<i>5,320 mg/l (mouse)</i>
141-78-6 ethyl acetate		
<i>Oral</i>	<i>LD50</i>	<i>5,620 mg/kg (rabbit)</i>
<i>Inhalative</i>	<i>LC50/4 h</i>	<i>1,600 mg/l (rat)</i>
78-92-2 butanol		
<i>Oral</i>	<i>LD50</i>	<i>6,480 mg/kg (rat)</i>
67-63-0 propan-2-ol		
<i>Oral</i>	<i>LD50</i>	<i>5,045 mg/kg (rat)</i>
<i>Dermal</i>	<i>LD50</i>	<i>12,800 mg/kg (rabbit)</i>
<i>Inhalative</i>	<i>LC50/4 h</i>	<i>30 mg/l (rat)</i>

- **Primary irritant effect:**
- **Skin corrosion/irritation** *Irritant to skin and mucous membranes.*
- **Serious eye damage/irritation** *Irritating effect.*
- **Respiratory or skin sensitisation** *Sensitisation 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*
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
Repr. 2

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.*
- **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.
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 not be disposed together with household garbage. Do not allow product to reach sewage system.

(Contd. on page 8)

Safety Data Sheet

in accordance with SANS

Printing date 24.08.2017

Version number 1.0


Revision: 23.08.2017

Trade name: *Resin solution X 50*

(Contd. of page 7)

- **Uncleaned packaging:**
- **Recommendation:** *Disposal must be made according to official regulations.*

14 Transport information

<ul style="list-style-type: none"> · UN-Number · ADR, IMDG, IATA 	<p style="margin: 0;"><i>UN1993</i></p>
<ul style="list-style-type: none"> · UN proper shipping name · ADR · IMDG · IATA 	<p style="margin: 0;"><i>1993 FLAMMABLE LIQUID, N.O.S. (ETHYL ACETATE, TOLUENE)</i></p> <p style="margin: 0;"><i>FLAMMABLE LIQUID, N.O.S. (ETHYL ACETATE, TOLUENE), MARINE POLLUTANT</i></p> <p style="margin: 0;"><i>FLAMMABLE LIQUID, N.O.S. (ETHYL ACETATE, TOLUENE)</i></p>
<ul style="list-style-type: none"> · Transport hazard class(es) · ADR, IMDG, IATA 	<div style="text-align: center;">  </div> <p style="margin: 0;"><i>3 Flammable liquids.</i></p> <p style="margin: 0;"><i>3</i></p>
<ul style="list-style-type: none"> · Packing group · ADR, IMDG, IATA 	<p style="margin: 0;"><i>III</i></p>
<ul style="list-style-type: none"> · Environmental hazards: 	<p style="margin: 0;"><i>Product contains environmentally hazardous substances: reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700)</i></p>
<ul style="list-style-type: none"> · Special precautions for user · Danger code (Kemler): · EMS Number: · Stowage Category 	<p style="margin: 0;"><i>Warning: Flammable liquids.</i></p> <p style="margin: 0;"><i>30</i></p> <p style="margin: 0;"><i>F-E, S-E</i></p> <p style="margin: 0;"><i>A</i></p>
<ul style="list-style-type: none"> · Transport in bulk according to Annex II of Marpol and the IBC Code 	<p style="margin: 0;"><i>Not applicable.</i></p>
<ul style="list-style-type: none"> · Transport/Additional information: 	
<ul style="list-style-type: none"> · ADR · Limited quantities (LQ) · Excepted quantities (EQ) 	<p style="margin: 0;"><i>5L</i></p> <p style="margin: 0;"><i>Code: E1</i></p> <p style="margin: 0;"><i>Maximum net quantity per inner packaging: 30 ml</i></p> <p style="margin: 0;"><i>Maximum net quantity per outer packaging: 1000 ml</i></p>
<ul style="list-style-type: none"> · Transport category · Tunnel restriction code 	<p style="margin: 0;"><i>3</i></p> <p style="margin: 0;"><i>D/E</i></p>
<ul style="list-style-type: none"> · IMDG · Limited quantities (LQ) 	<p style="margin: 0;"><i>5L</i></p>

(Contd. on page 9)

ZA

Safety Data Sheet

in accordance with SANS

Printing date 24.08.2017

Version number 1.0

Revision: 23.08.2017

Trade name: *Resin solution X 50*

(Contd. of page 8)

· Excepted quantities (EQ)	<i>Code: E1</i> <i>Maximum net quantity per inner packaging: 30 ml</i> <i>Maximum net quantity per outer packaging: 1000 ml</i>
· UN "Model Regulation":	<i>UN 1993 FLAMMABLE LIQUID, N.O.S. (ETHYL ACETATE, TOLUENE), 3, III</i>

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **GHS label elements** *The product is classified and labelled according to the Globally Harmonised System (GHS).*
- **Hazard pictograms**



- **Signal word** *Danger*
- **Hazard-determining components of labelling:**
*reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700)
toluene*
- **Hazard statements**
Flammable liquid and vapour.
May be harmful if inhaled.
Causes skin irritation.
Causes serious eye irritation.
May cause an allergic skin reaction.
Suspected of damaging fertility or the unborn child.
May cause drowsiness or dizziness.
May cause damage to organs through prolonged or repeated exposure.
May be fatal if swallowed and enters airways.
Toxic to aquatic life with long lasting effects.
- **Precautionary statements**
If medical advice is needed, have product container or label at hand.
Keep out of reach of children.
Read label before use.
Keep away from heat/sparks/open flames/hot surfaces. No smoking.
IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** *None of the ingredients is listed.*
- **Seveso category**
E2 Hazardous to the Aquatic Environment
P5c FLAMMABLE LIQUIDS
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** *200 t*
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** *500 t*

(Contd. on page 10)

Safety Data Sheet

in accordance with SANS

Printing date 24.08.2017

Version number 1.0

Revision: 23.08.2017

Trade name: Resin solution X 50

(Contd. of page 9)

· **Chemical safety assessment:** A Chemical Safety Assessment has not 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.
 H226 Flammable liquid and vapour.
 H303 May be harmful if swallowed.
 H304 May be fatal if swallowed and enters airways.
 H315 Causes skin irritation.
 H317 May cause an allergic skin reaction.
 H319 Causes serious eye irritation.
 H333 May be harmful if inhaled.
 H335 May cause respiratory irritation.
 H336 May cause drowsiness or dizziness.
 H361 Suspected of damaging fertility or the unborn child.
 H373 May cause damage to organs through prolonged or repeated exposure.
 H411 Toxic to aquatic life with long lasting effects.

· **Department issuing SDS:** Product safety department.

· **Contact:** Dr. Peter Mayer

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
 IMDG: International Maritime Code for Dangerous Goods
 IATA: International Air Transport Association
 EINECS: European Inventory of Existing Commercial Chemical Substances
 ELINCS: European List of Notified Chemical Substances
 CAS: Chemical Abstracts Service (division of the American Chemical Society)
 VOC: Volatile Organic Compounds (USA, EU)
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent
 PBT: Persistent, Bioaccumulative and Toxic
 vPvB: very Persistent and very Bioaccumulative
 Flam. Liq. 2: Flammable liquids – Category 2
 Flam. Liq. 3: Flammable liquids – Category 3
 Acute Tox. 5: Acute toxicity – Category 5
 Skin Irrit. 2: Skin corrosion/irritation – Category 2
 Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
 Skin Sens. 1: Skin sensitisation – Category 1
 Repr. 2: Reproductive toxicity – Category 2
 STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
 STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
 Asp. Tox. 1: Aspiration hazard – Category 1
 Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2