

### ***Hazard(s) identification***

· **Classification of the substance or mixture**



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.  
Flam. Liq. 4 H227 Combustible liquid.

· **Label elements**

· **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS07

· **Signal word** Warning

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

reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight  $\leq$  700)  
oxirane, mono[(C12-14-alkyloxy)methyl] derivs

· **Hazard statements**

Combustible liquid.  
Causes skin irritation.  
Causes serious eye irritation.  
May cause an allergic skin reaction.

· **Precautionary statements**

Keep away from flames and hot surfaces. – No smoking.  
Avoid breathing dust/fume/gas/mist/vapors/spray  
Wash thoroughly after handling.  
Contaminated work clothing must not be allowed out of the workplace.  
Wear protective gloves/protective clothing/eye protection/face protection.

If on skin: Wash with plenty of water.  
 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 Take off contaminated clothing and wash it before reuse.  
 If skin irritation or rash occurs: Get medical advice/attention.  
 Specific treatment (see on this label).  
 If eye irritation persists: Get medical advice/attention.  
 Wash contaminated clothing before reuse.  
 In case of fire: Use for extinction: CO<sub>2</sub>, powder or water spray.  
 Store in a well-ventilated place. Keep cool.  
 Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



- **HMIS-ratings (scale 0 - 4)**



- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

### *Composition/information on ingredients*

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

|   |       |
|---|-------|
| 25068-38-6 reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700) | 63.0% |
| 68609-97-2 oxirane, mono[(C12-14-alkyloxy)methyl] derivs  | 18.0% |

### *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. 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.

***Fire-fighting measures***

- **Extinguishing media**
- **Suitable extinguishing agents:**  
CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture**  
No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

***Accidental release measures***

**Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

- **Environmental precautions:** 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).  
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.

**Protective Action Criteria for Chemicals**

**PAC-1:**

25068-38-6 reaction product: bisphenol-A-(epichlorhydrin) epoxy resin 90 mg/m<sup>3</sup>  
(number average molecular weight  $\leq$  700)

**PAC-2:**

25068-38-6 reaction product: bisphenol-A-(epichlorhydrin) epoxy resin 990 mg/m<sup>3</sup>  
(number average molecular weight  $\leq$  700)

**PAC-3:**

25068-38-6 reaction product: bisphenol-A-(epichlorhydrin) epoxy resin 5,900 mg/m<sup>3</sup>  
(number average molecular weight  $\leq$  700)

***Handling and storage***

- **Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about protection against explosions and fires:**  
Keep ignition sources away - Do not smoke.

**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 receptacle tightly sealed.
- **Specific end use(s)** No further relevant information available.

***Exposure controls/personal protection***

- **Additional information about design of technical systems:**  
No further data; see item 7.
- **Control parameters**
- **Components 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 that were valid during the creation 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.
- **Breathing equipment:** Not required.
- **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

*Physical and chemical properties*

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

· **General Information**

· **Appearance:**

Form: Fluid  
Color: According to product specification

· **Odor:** Characteristic

· **Odor threshold:** Not determined.

· **pH-value:** Not determined.

· **Change in condition**

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: Undetermined.

· **Flash point:** 93 °C (199.4 °F)

· **Flammability (solid, gaseous):** Not applicable.

· **Decomposition temperature:** Not determined.

· **Auto igniting:** Product is not selfigniting.

· **Danger of explosion:** Not determined.

· **Explosion limits:**

Lower: Not determined.

Upper: Not determined.

· **Vapor pressure:** Not determined.

· **Density at 20 °C (68 °F):** 1.12 g/cm<sup>3</sup> (9.3464 lbs/gal)

· **Relative density** Not determined.

· **Vapor 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:**

Dynamic at 20 °C (68 °F): 720 mPas

Kinematic: Not determined.

· **Solvent content:**

VOC content: 0.00 %  
0.0 g/l / 0.00 lb/gl

· **Other information** No further relevant information available.

### *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.

### *Toxicological information*

- **Information on toxicological effects**
- **Acute toxicity:**
- **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 internally approved calculation methods for preparations:  
Irritant
- **Carcinogenic categories**
- **IARC (International Agency for Research on Cancer)**  
None of the ingredients is listed.
- **NTP (National Toxicology Program)**  
None of the ingredients is listed.
- **OSHA-Ca (Occupational Safety & Health Administration)**  
None of the ingredients is listed.

### *Ecological information*

#### **Toxicity**

- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior 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 (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.

***Disposal considerations***

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

***Transport information***

- **UN-Number**
- **DOT** not regulated
- **IMDG, IATA** UN3082
- **UN proper shipping name**
- **DOT** not regulated
- **IMDG** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight 700)), MARINE POLLUTANT
- **IATA** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight 700))
- **Transport hazard class(es)**
- **DOT Class** not regulated
- **IMDG, IATA**
- **Class**  9 Miscellaneous dangerous substances and articles
- **Label** 9
- **Packing group**
- **DOT** not regulated



|  |   |
|--|---|
| <b>IMDG, IATA</b>  | III   |
| · <b>Environmental hazards:</b>  | Product contains environmentally hazardous substances: reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight $\leq 700$ )                 |
| · <b>Marine pollutant:</b>   | Symbol (fish and tree)  |
| · <b>Special marking (IATA):</b>   | Symbol (fish and tree)  |
| · <b>Special precautions for user</b>  | Warning: Miscellaneous dangerous substances and articles  |
| · <b>Danger code (Kemler):</b>   | 90  |
| · <b>EMS Number:</b>   | F-A,S-F   |
| · <b>Stowage Category</b>  | A   |
| · <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b> | Not applicable.   |
| · <b>Transport/Additional information:</b>                                       |   |
| · <b>IMDG</b>  |   |
| · <b>Limited quantities (LQ)</b>   | 5L  |
| · <b>Excepted quantities (EQ)</b>  | Code: E1<br>Maximum net quantity per inner packaging: 30 ml<br>Maximum net quantity per outer packaging: 1000 ml  |
| · <b>UN "Model Regulation":</b>  | UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S. (REACTION PRODUCT: BISPHENOL-A-(EPICHLORHYDRIN) EPOXY RESIN (NUMBER AVERAGE MOLECULAR WEIGHT $\leq 700$ )), 9, III |

### *Regulatory information*

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**  
**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.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

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

None of the ingredients is listed.

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

None of the ingredients is listed.

**GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS07

· **Signal word** Warning

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

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

oxirane, mono[(C12-14-alkyloxy)methyl] derivs

· **Hazard statements**

Combustible liquid.

Causes skin irritation.

Causes serious eye irritation.

May cause an allergic skin reaction.

· **Precautionary statements**

Keep away from flames and hot surfaces. – No smoking.

Avoid breathing dust/fume/gas/mist/vapors/spray

Wash thoroughly after handling.

Contaminated work clothing must not be allowed out of the workplace.

Wear protective gloves/protective clothing/eye protection/face protection.

If on skin: Wash with plenty of water.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Take off contaminated clothing and wash it before reuse.

If skin irritation or rash occurs: Get medical advice/attention.

Specific treatment (see on this label).

If eye irritation persists: Get medical advice/attention.

Wash contaminated clothing before reuse.

In case of fire: Use for extinction: CO<sub>2</sub>, powder or water spray.

Store in a well-ventilated place. Keep cool.

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

· **Chemical safety assessment:**

A Chemical Safety Assessment has not been carried out.



**Hazard(s) identification**

· **Classification of the substance or mixture**

The product is not classified, according to the Globally Harmonized System (GHS).

· **Label elements**

· **GHS label elements** Void

· **Hazard pictograms** Void

· **Signal word** Void

· **Hazard statements** Void

· **Precautionary statements**

Wear protective gloves/protective clothing/eye protection/face protection.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 0

Fire = 1

Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = 0

Fire = 1

Reactivity = 0

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

**Composition/information on ingredients**

· **Chemical characterization: Mixtures**

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

· **Dangerous components:**

79-09-4 propionic acid

5.0%



### *First-aid measures*

- **Description of first aid measures**
- **General information:** No special measures required.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **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.

### *Fire-fighting measures*

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture**  
No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

### *Accidental release measures*

- **Personal precautions, protective equipment and emergency procedures**  
Not required.
- **Environmental precautions:**  
Dilute with plenty of water.  
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).
- **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.

#### **Protective Action Criteria for Chemicals**

##### **PAC-1:**

79-09-4 propionic acid 15 ppm

##### · **PAC-2:**

79-09-4 propionic acid 28 ppm

##### **PAC-3:**

79-09-4 propionic acid 170 ppm

### *Handling and storage*

#### **Handling:**

- **Precautions for safe handling** No special measures required.
- **Information about protection against explosions and fires:**  
No special measures required.
- **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:** None.
- **Specific end use(s)** No further relevant information available.

### *Exposure controls/personal protection*

#### **Additional information about design of technical systems:**

No further data; see item 7.

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

#### **79-09-4 propionic acid**

REL Short-term value: 45 mg/m<sup>3</sup>, 15 ppm

Long-term value: 30 mg/m<sup>3</sup>, 10 ppm

TLV Long-term value: 30 mg/m<sup>3</sup>, 10 ppm

- **Additional information:**

The lists that were valid during the creation were used as basis.

- **Exposure controls**

- **Personal protective equipment:**

- **General protective and hygienic measures:**

The usual precautionary measures for handling chemicals should be followed.

- **Breathing equipment:** Not required.

- **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:** Goggles recommended during refilling.

*Physical and chemical properties*

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

· **General Information**

· **Appearance:**

|                 |                                    |
|-----------------|------------------------------------|
| Form:           | Fluid                              |
| Color:          | According to product specification |
| Odor:           | Characteristic                     |
| Odor threshold: | Not determined.                    |

pH-value at 20 °C (68 °F):

**Change in condition**

|                              |               |
|------------------------------|---------------|
| Melting point/Melting range: | Undetermined. |
| Boiling point/Boiling range: | Undetermined. |

Flash point: 100 °C (212 °F)

- **Flammability (solid, gaseous):** Not applicable.
- **Ignition temperature:** 485 °C (905 °F)
- **Decomposition temperature:** Not determined.
- **Auto igniting:** Product is not selfigniting.
- **Danger of explosion:** Product does not present an explosion hazard.

**Explosion limits:**

|        |                 |
|--------|-----------------|
| Lower: | Not determined. |
| Upper: | Not determined. |

- **Vapor pressure:** Not determined.
- **Density at 20 °C (68 °F):** 1.04 g/cm<sup>3</sup> (8.6788 lbs/gal)
- **Relative density** Not determined.
- **Vapor density** Not determined.
- **Evaporation rate** Not determined.

· **Solubility in / Miscibility with**

**Water:** Fully miscible.

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

· **Viscosity:**

|                           |                 |
|---------------------------|-----------------|
| Dynamic at 20 °C (68 °F): | 280 mPas        |
| Kinematic:                | Not determined. |



- Solvent content:**  
**VOC content:** 0.00 %  
0.0 g/l / 0.00 lb/gl
- **Other information** No further relevant information available.

### *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.

### *Toxicological information*

- **Information on toxicological effects**
- **Acute toxicity:**
- **LD/LC50 values that are relevant for classification:**
  - **ATE (Acute Toxicity Estimate)**  
Oral LD50 52,000 mg/kg (rat)  
Dermal LD50 10,000 mg/kg (rabbit)
  - **79-09-4 propionic acid**  
Oral LD50 2,600 mg/kg (rat)  
Dermal LD50 500 mg/kg (rabbit)
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**  
The product is not subject to classification according to internally approved calculation methods for preparations:  
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.
- **Carcinogenic categories**
- **IARC (International Agency for Research on Cancer)**  
None of the ingredients is listed.
- **NTP (National Toxicology Program)**  
None of the ingredients is listed.
- **OSHA-Ca (Occupational Safety & Health Administration)**  
None of the ingredients is listed.



*Ecological information*

**Toxicity**

**Aquatic toxicity:** No further relevant information available.

**Persistence and degradability** No further relevant information available.

**Behavior 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 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

**Results of PBT and vPvB assessment**

**PBT:** Not applicable.

**vPvB:** Not applicable.

**Other adverse effects** No further relevant information available.

*Disposal considerations*

**Waste treatment methods**

**Recommendation:** Smaller quantities can be disposed of with household waste.

**Uncleaned packagings:**

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

*Transport information*

**UN-Number**

**DOT, ADN, IMDG, IATA** not regulated

**· UN proper shipping name**

**· DOT, ADN, IMDG, IATA** not regulated

**Transport hazard class(es)**

**· DOT, ADN, IMDG, IATA**

**· Class** not regulated

**Packing group**

**· DOT, IMDG, IATA** not regulated

**· Environmental hazards:**

Not applicable.

**· Special precautions for user**

Not applicable.



**Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.  
**UN "Model Regulation":** not regulated

***Regulatory information***

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **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.
- **Carcinogenic categories**
- **EPA (Environmental Protection Agency)**  
None of the ingredients is listed.
- **TLV (Threshold Limit Value established by ACGIH)**  
None of the ingredients is listed.
- **NIOSH-Ca (National Institute for Occupational Safety and Health)**  
None of the ingredients is listed.
- **GHS label elements** Void
- **Hazard pictograms** Void
- **Signal word** Void
- **Hazard statements** Void
- **Precautionary statements**  
Wear protective gloves/protective clothing/eye protection/face protection.  
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- **Chemical safety assessment:**  
A Chemical Safety Assessment has not been carried out.