

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/19/2017

Reviewed on 05/19/2017

## 1 Identification

- **Product identifier**
  - **Trade name:** EP691 Clear B
  - **Application of the substance / the mixture:** Epoxy Hardener
- **Details of the supplier of the safety data sheet**
  - **Manufacturer/Supplier:**  
ResinLab, LLC  
N109 W13300 Ellsworth Drive  
Germantown, WI 53022  
1-877-259-1669  
www.resinlab.com
  - **Information Department:** Product Safety Department: mdsd@resinlab.com
  - **Emergency Telephone Number:**  
North America - Chemtrec: 1-800-424-9300 (24 hours)  
International - Chemtrec: 01-703-527-3887 (24 hours)

## 2 Hazard(s) identification

- **Classification of the substance or mixture**  
Skin Corr. 1C H314 Causes severe skin burns and eye damage.  
Skin Sens. 1 H317 May cause an allergic skin reaction.

- **Label elements**

- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS05 GHS07

- **Signal word** Danger

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

Poly(oxypropylene)diamine  
Bisphenol-A-(epichlorohydrin) epoxy resin

- **Hazard statements**

H314 Causes severe skin burns and eye damage.  
H317 May cause an allergic skin reaction.

- **Precautionary statements**

Do not breathe dusts or mists.  
Wash thoroughly after handling.  
Contaminated work clothing must not be allowed out of the workplace.  
Wear protective gloves / eye protection / face protection.  
If swallowed: Rinse mouth. Do NOT induce vomiting.  
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
Immediately call a POISON CENTER/doctor.  
Specific treatment (see on this label).  
If skin irritation or rash occurs: Get medical advice/attention.  
Wash contaminated clothing before reuse.  
Store locked up.  
Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Classification system:**

- **NFPA System**

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



Health = 3  
Fire = 1  
Reactivity = 0

NFPA special hazards (water reactivity and oxidizing property): None

- **HMIS System**

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



Health = 3  
Fire = 1  
Reactivity = 0

- **Other hazards**

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

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### 3 Composition/information on ingredients

- Chemical characterization: Mixtures

- Dangerous components:

CAS: 9046-10-0	Poly(oxypropylene)diamine Skin Corr. 1C, H314; Eye Dam. 1, H318 Aquatic Chronic 2, H411 Aquatic Acute 3, H402	70-80%
CAS: 25068-38-6 NLP: 500-033-5 Index number: 603-074-00-8	Bisphenol-A-(epichlorohydrin) epoxy resin Aquatic Chronic 2, H411 Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Skin Sens. 1, H317	25-30%

- Additional information:

If the chemical name/CAS number is proprietary and or weight percentage is listed as a range, the specific chemical identity and or percentage of composition has been withheld as a trade secret.

### 4 First-aid measures

- Description of first aid measures

- General information:

Keep warm, position comfortably and cover well.  
Immediately remove any clothing soiled by the product.

- After inhalation:

Supply fresh air and if symptoms occur 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.  
If skin irritation or rash occurs, get medical advice/attention.

- After eye contact:

Rinse opened eye for 10-15 minutes under running water. Then consult a doctor.  
Remove contact lenses if present and easy to do so; continue rinsing.  
Do not put any ointments, oils or medication in eyes without specific instructions.  
Get medical attention.

- After swallowing:

If victim is unconscious; never give anything by mouth.  
Do NOT induce vomiting.  
If vomiting occurs spontaneously, keep victim's head below hips to prevent aspiration of liquid into lungs.  
Seek medical treatment.

- 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  
Check section 11 Toxicological Information for further relevant information.

### 5 Fire-fighting measures

- Extinguishing media

- Suitable extinguishing agents:

Alcohol resistant foam  
Fire-extinguishing powder  
Carbon dioxide  
Water spray

Use fire fighting measures that suit the environment.

- Special hazards arising from the substance or mixture

In case of fire, the following can be released:

Nitrogen oxides (NO<sub>x</sub>)  
Carbon dioxide (CO<sub>2</sub>) and Carbon monoxide (CO)

- Advice for firefighters

- Protective equipment:

Mouth respiratory protective device.  
If employees are expected to fight fires, they must be trained and equipped as stated in the OSHA fire brigades standard (29 CFR 1910.156).  
As with any fire, wear positive-pressure self-contained breathing apparatus and full protective gear that are NIOSH approved.

### 6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.  
Do not breathe gas, vapors, dusts or mists if their inhalable particles occur during use.

- 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:

For large spills: provide diking or containment to minimize spreading. If possible pump and store material in appropriate container.  
For small spills: Ventilate and wash area. Collect spills and absorbant material in appropriate container.  
Ensure adequate ventilation.  
Allow molten product to cool.  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Use neutralizing agent if necessary.

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Dispose contaminated material as waste according to item 13.

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### 7 Handling and storage

- **Handling:**
  - **Precautions for safe handling**
    - Ensure good ventilation/exhaustion at the workplace.
    - Prevent formation of aerosols.
    - Keep away from incompatible material(s).
    - Avoid any release into the environment.
    - For industrial or professional use only
    - Do not breathe dust/fumes/mist/vapor/spray.
    - Avoid contact with eyes, skin and clothing.
    - Keep away from heat, sparks, flames and ignition sources.
    - Observe all the personal protection requirements in Section 8.
- **Conditions for safe storage, including any incompatibilities**
  - **Storage:**
    - **Requirements to be met by storerooms and receptacles:**
      - Provide ventilation for receptacles.
      - Keep stored in accordance with local, regional, national, and international regulations.

### 8 Exposure controls/personal protection

- **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 Occupational Exposure Limit Values for possible hazards during processing:** None.
- **Exposure controls**
  - If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits.
  - If exposure limits have not been established, maintain airborne levels to an acceptable level.
  - **Personal protective equipment:**
    - **General protective and hygienic measures:**
      - Be sure to clean skin thoroughly after work and before breaks.
      - Keep away from foodstuffs, beverages and feed.
      - Immediately remove all soiled and contaminated clothing.
      - Avoid contact with the eyes and skin.
    - **Personal Protective Equipment (PPE)**
      - **Breathing equipment:**
        - Sufficient ventilation in pattern and volume should be provided in order to maintain air contaminant levels below recommended exposure limits.
        - Use a NIOSH approved air-purifying organic vapor respirator if occupational limits are exceeded. For emergency situations, confined space use, or other conditions where exposure limits may be greatly exceeded, use an approved air supplied respirator. Observe OSHA regulations (29CFR 1910.134) for respirator use.
      - **Protection of hands:**
        - The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
        - Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
          - **Material of gloves**
  - **Eye protection:**
    -  Safety Glasses with side shields
  - **Body protection:** Appropriate chemical resistant clothing.
  - **Limitation and supervision of exposure into the environment**
    - The Engineering measures or controls, and PPE recommendations are only guidelines and may not apply to every situation. For additional information, please consult the corresponding requirements under OSHA 29 CFR 1910.94-95, and 29 CFR 1910.132-138.



Chemical resistant gloves



Safety Glasses with side shields

### 9 Physical and chemical properties

- **Information on basic physical and chemical properties**
  - **General Information**
    - **Appearance:**
      - **Form:** Liquid
      - **Color:** Colorless
    - **Odor:** Amine-like
    - **Odor threshold:** Not determined.

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· <b>pH-value:</b>	Not determined.
· <b>Change in condition</b>	
· <b>Melting point/Melting range:</b>	Undetermined.
· <b>Boiling point/Boiling range:</b>	Undetermined.
· <b>Flash point:</b>	>121 °C (>250 °F)
· <b>Flammability (solid, gaseous):</b>	Not applicable.
· <b>Ignition temperature:</b>	Not determined.
· <b>Decomposition temperature:</b>	Not determined.
· <b>Auto igniting:</b>	Product is not selfigniting.
· <b>Danger of explosion:</b>	Product does not present an explosion hazard.
· <b>Explosion limits:</b>	
· <b>Lower:</b>	Not determined.
· <b>Upper:</b>	Not determined.
· <b>Vapor pressure:</b>	Not determined.
· <b>Vapor Density:</b>	not determined
· <b>Density at 20 °C (68 °F):</b>	1 g/cm <sup>3</sup> (8.345 lbs/gal)
· <b>Relative density</b>	Not determined.
· <b>Vapor density</b>	Not determined.
· <b>Evaporation rate</b>	Not determined.
· <b>Solubility in / Miscibility with</b>	
· <b>Water:</b>	Fully miscible.
· <b>Partition coefficient (n-octanol/water):</b>	Not determined.
· <b>Viscosity:</b>	
· <b>Dynamic:</b>	Not determined.
· <b>Kinematic:</b>	Not determined.
· <b>Solvent content:</b>	
· <b>Organic solvents:</b>	0.0 %
· <b>VOC content:</b>	0.0 g/l / 0.00 lb/gl

### 10 Stability and reactivity

- **Reactivity** Not a regulated physical hazard under GHS.
  - **Hazardous Reactivity and Chemical Stability** Stable under normal conditions of use, storage and temperatures.
  - **Thermal decomposition / conditions to be avoided:**  
To avoid thermal decomposition do not overheat.  
No decomposition if used and stored according to specifications.
  - **Possibility of hazardous reactions** Polymerization occurs with mineral acids.
  - **Conditions to avoid** Keep away from heat, sparks, flame and any other ignition sources.
  - **Incompatible materials:**  
Oxidizing agents  
Mercaptans  
Acids  
Amines  
Bases (Alkalis)
  - **Hazardous decomposition products:**  
Possible in traces.  
Refer to section 5.
  - **Additional information:**  
As long as the prescribed application concentrations are maintained there is no danger that stable emulsions will form.

### 11 Toxicological information

- **Information on toxicological effects**
  - **Acute toxicity:**
    - **LD/LC50 values that are relevant for classification:**  
If swallowed, may cause:  
diarrhea  
Not a classified acute oral hazard.

#### 9046-10-0 Poly(oxypropylene)diamine

Oral	LD50	2885 mg/kg (rat) (similar to OECD guideline 401) Reference: Vendor SDS (2015).
Dermal	LD50	2980 mg/kg (rabbit) (similar to OECD guideline 402) Reference: Vendor SDS (2015).
Inhalative	LC50/4 h	not classified mg/l (read across from 101-68-8) (Exposure Time 8h)

#### 25068-38-6 Bisphenol-A-(epichlorohydrin) epoxy resin

Oral	LD50	11400 mg/kg (rat)
Dermal	LD50	20000 mg/kg (rabbit) (Test guideline not available)
Inhalative	LC50/4 h	(Test species: n/a) (Toxicity not expected based on the acute oral data)

- **Specific symptoms in biological assay:** Not a classified acute dermal hazard.

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- **Primary irritant effect:** Not a classified acute inhalative hazard.
  - **on the skin:** No irritant effect.
  - **on the eye:** Strong irritant with the danger of severe eye injury.
- **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.

### 12 Ecological information

- **Toxicity**

- **Aquatic toxicity:**

- **9046-10-0 Poly(oxypropylene)diamine**

EC50 corrosive mg/kg (rabbit) (similar to OECD guideline 404)  
Reference: Vendor SDS 2015

- **25068-38-6 Bisphenol-A-(epichlorohydrin) epoxy resin**

EC50 irritating mg/kg (rabbit)

- **Persistence and degradability** No further relevant information available.
  - **Other information:** The product is easily biodegradable.
- **Behavior in environmental systems:**
  - **Bioaccumulative potential** No data available.
  - **Mobility in soil** No further relevant information available.
- **Additional ecological information:** The product is non-rapid degradable, and low or not highly bioaccumulative.
  - **General notes:**  
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:** None of the ingredients is listed.
  - **vPvB:** None of the ingredients is listed.
- **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 of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
  - **Recommendation:** Dispose of according to your local waste regulations.
  - **Recommended cleansing agent:** Water, if necessary with cleansing agents.

### 14 Transport information

- **UN-Number**
- **DOT, IMDG, IATA** UN2735
- **UN proper shipping name**
  - **DOT** Polyamines, liquid, corrosive, n.o.s. (Poly(oxypropylene)diamine)
  - **IMDG** POLYAMINES, LIQUID, CORROSIVE, N. O. S. (Poly(oxypropylene)diamine), MARINE POLLUTANT
  - **IATA** POLYAMINES, LIQUID, CORROSIVE, N. O. S. (Poly(oxypropylene)diamine)
- **Transport hazard class(es)**
  - **DOT**



- **Class**

8 Corrosive substances

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<ul style="list-style-type: none"> <li>· <b>Label</b></li> </ul>	8
<ul style="list-style-type: none"> <li>· <b>IMDG</b></li> </ul> <div style="display: flex; justify-content: space-around;">   </div>	
<ul style="list-style-type: none"> <li>· <b>Class</b></li> <li>· <b>Label</b></li> </ul>	8 Corrosive substances 8
<ul style="list-style-type: none"> <li>· <b>IATA</b></li> </ul> <div style="display: flex; justify-content: center;">  </div>	
<ul style="list-style-type: none"> <li>· <b>Class</b></li> <li>· <b>Label</b></li> </ul>	8 Corrosive substances 8
<ul style="list-style-type: none"> <li>· <b>Packing group</b></li> <li>· <b>DOT, IMDG, IATA</b></li> </ul>	III
<ul style="list-style-type: none"> <li>· <b>Environmental hazards:</b></li> <li>· <b>Marine pollutant:</b></li> </ul>	Yes Symbol (fish and tree)
<ul style="list-style-type: none"> <li>· <b>Special precautions for user</b></li> <li>· <b>Danger code (Kemler):</b></li> <li>· <b>EMS Number:</b></li> <li>· <b>Stowage Category</b></li> <li>· <b>Segregation Code</b></li> </ul>	Warning: Corrosive substances 80 F-A,S-B A SG35 Stow "separated from" acids.
<ul style="list-style-type: none"> <li>· <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b></li> </ul>	Not applicable.
<ul style="list-style-type: none"> <li>· <b>Transport/Additional information:</b></li> <li>· <b>DOT</b></li> <li>· <b>Quantity limitations</b></li> <li>· <b>Remarks:</b></li> </ul>	On passenger aircraft/rail: 5 L On cargo aircraft only: 60 L Special marking with the symbol (fish and tree).
<ul style="list-style-type: none"> <li>· <b>IMDG</b></li> <li>· <b>Limited quantities (LQ)</b></li> <li>· <b>Excepted quantities (EQ)</b></li> </ul>	5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
<ul style="list-style-type: none"> <li>· <b>UN "Model Regulation":</b></li> </ul>	UN 2735 POLYAMINES, LIQUID, CORROSIVE, N.O.S. (POLY(OXYPROPYLENE)DIAMINE), 8, III

### 15 Regulatory information

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

<ul style="list-style-type: none"> <li>· <b>SARA Section 355 (extremely hazardous substances):</b></li> </ul>		
None of the ingredients is listed.		
<ul style="list-style-type: none"> <li>· <b>SARA Section 313 (Specific toxic chemical listings):</b></li> </ul>		
None of the ingredients is listed.		
<ul style="list-style-type: none"> <li>· <b>SARA Section 311/312 (Hazardous Chemical Inventory Reporting)</b></li> </ul>		
9046-10-0	Poly(oxypropylene)diamine	A
25068-38-6	Bisphenol-A-(epichlorohydrin) epoxy resin	A, C
		70-80%
		25-30%

- **Hazard Abbreviations for SARA 311/312**

A - Acute Health Hazard  
 C - Chronic Health Hazard  
 F - Fire Hazard  
 R - Reactive Hazard  
 S - Sudden Release of Pressure Hazard

- **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

- **Proposition 65**

- **Chemicals known to cause cancer:**

106-89-8 1-chloro-2,3-epoxypropane

- **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

- **Chemicals known to cause reproductive toxicity for males:**

106-89-8 1-chloro-2,3-epoxypropane

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· **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.

· **International Regulation Lists**

· **Chinese Chemical Inventory of Existing Chemical Substances:**

All ingredients are listed.

· **GHS label elements** GHS label elements

· **National regulations:**

· **Japanese Existing and New Chemical Substance List:**

All ingredients are listed.

· **Korean Existing Chemical Inventory:**

All ingredients are listed.

· **European Pre-registered substances:**

All ingredients are listed.

· **REACH - Substances of Very High Concern (SVHC) List:**

None of the ingredients is listed.

· **Restriction of Hazardous Substances Directive (RoHS) list:**

None of the ingredients is listed.

· **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.

- **Department Issuing (M)SDS:** Product Development Department
- **Contact:** msds@resinlab.com
- **Date of preparation / last revision** 05/19/2017 / 2
- \* **Data compared to the previous version altered.**