

### 1 Identification

- **Product identifier**
- **Trade name:** *Epoxy CR-2100 Part A*
- **Article number:** EP CR-2100 PT A
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
AquaBond LLC  
6444 E Spring St #275  
Long Beach, CA 90815  
USA
- **EMERGENCY PHONE:** For product emergency involving spill, leak, fire, exposure, or accident call CHEMTREC at (800) 424-9300. For all other inquires call AquaBond LLC at (714) 961-1420

### 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS08 Health hazard

Carc. 1A H350 May cause cancer.



GHS07

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.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**



Irritant

Irritating to eyes and skin. May cause sensitisation by skin contact.

- **Information concerning particular hazards for human and environment:**

The product has to be labeled due to the calculation procedure of international guidelines.

- **Classification system:**

The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

- **Label elements**

- **Labelling according to EU guidelines:**

The product has been classified and marked in accordance with directives on hazardous materials.

- **Code letter and hazard designation of product:**



Irritant

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

Epoxy Resin - Proprietary

1,4-bis(2,3-epoxypropoxy)butane

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**· Risk phrases:**

Irritating to eyes and skin.  
May cause sensitisation by skin contact.

**· Safety phrases:**

Keep out of the reach of children.  
Avoid contact with skin and eyes.  
Wear suitable gloves and eye/face protection.  
If swallowed, seek medical advice immediately and show this container or label.  
Dispose of this material and its container to hazardous or special waste collection point.

**· Special labeling of certain preparations:**

Contains epoxy constituents. See information supplied by the manufacturer.

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


Health = 1  
Fire = 1  
Reactivity = 0

**· HMIS-ratings (scale 0 - 4)**


Health = 1  
Fire = 1  
Reactivity = 0

**· 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 the substances listed below with nonhazardous additions.

**· Dangerous components:**

|            |                                 |         |
|------------|---------------------------------|---------|
|            | Epoxy Resin - Proprietary       | 25-50%  |
| 14808-60-7 | Quartz (SiO <sub>2</sub> )      | 25-50%  |
| 2425-79-8  | 1,4-bis(2,3-epoxypropoxy)butane | 2.5-10% |

### 4 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.

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- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### 5 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.

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **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.

### 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of aerosols.
- **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:** Keep receptacle tightly sealed.
- **Specific end use(s)** No further relevant information available.

### 8 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:**

**14808-60-7 Quartz (SiO<sub>2</sub>)**

|     |   |
|-----|---|
| PEL | see Quartz listing  |
| REL | Long-term value: 0.05* mg/m <sup>3</sup><br>*respirable dust; See Pocket Guide App. A |
| TLV | Long-term value: 0.025* mg/m <sup>3</sup><br>*as respirable fraction                  |

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- **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:**
  - In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
- **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:

|                         |                 |
|-------------------------|-----------------|
| <b>Form:</b>            | Liquid          |
| <b>Color:</b>           | Clear           |
| <b>Odor:</b>            | Characteristic  |
| <b>Odour threshold:</b> | Not determined. |

· **pH-value:** Not determined.

##### · Change in condition

|                                     |                 |
|-------------------------------------|-----------------|
| <b>Melting point/Melting range:</b> | Undetermined.   |
| <b>Boiling point/Boiling range:</b> | 261 °C (502 °F) |

· **Flash point:** 249 °C (480 °F)

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

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|   |   |
|---|---|
| · <b>Ignition temperature:</b>                    |   |
| · <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>Density at 20 °C (68 °F):</b>                | 1.62 g/cm <sup>3</sup> (13.519 lbs/gal)       |
| · <b>Relative density</b>                         | Not determined.                               |
| · <b>Vapour density</b>                           | Not determined.                               |
| · <b>Evaporation rate</b>                         | Not determined.                               |
| · <b>Solubility in / Miscibility with Water:</b>  | Not miscible or difficult to mix.             |
| · <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>Other information</b>                        | No further relevant information available.    |

## 10 Stability and reactivity

- **Reactivity**
- **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:**
- **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

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**· Carcinogenic categories**
**· IARC (International Agency for Research on Cancer)**

|            |                            |    |
|------------|----------------------------|----|
| 14808-60-7 | Quartz (SiO <sub>2</sub> ) | 1  |
| 1309-37-1  | diiron trioxide            | 3  |
| 13463-67-7 | titanium dioxide           | 2B |

**· NTP (National Toxicology Program)**

|            |                            |   |
|------------|----------------------------|---|
| 14808-60-7 | Quartz (SiO <sub>2</sub> ) | K |
|------------|----------------------------|---|

**· OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

### 12 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.

### 13 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.

### 14 Transport information

**· UN-Number**
**· DOT, ADN, IATA**
**· IMDG**

not regulated

UN3082

**· UN proper shipping name**
**· DOT, ADN, IATA**
**· IMDG**

not regulated

 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,  
 N.O.S., MARINE POLLUTANT


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|  |  |
|--|--|
| <ul style="list-style-type: none"> <li>· <b>Transport hazard class(es)</b></li> <li>· <b>DOT, ADN, IATA</b></li> <li>· <b>Class</b></li> </ul>       | not regulated  |
| <ul style="list-style-type: none"> <li>· <b>IMDG</b></li> </ul>  |  |
|   |  |
| <ul style="list-style-type: none"> <li>· <b>Class</b></li> <li>· <b>Label</b></li> </ul>   | 9 Miscellaneous dangerous substances and articles<br>9   |
| <ul style="list-style-type: none"> <li>· <b>Packing group</b></li> <li>· <b>DOT, IATA</b></li> <li>· <b>IMDG</b></li> </ul>                          | not regulated<br>III   |
| <ul style="list-style-type: none"> <li>· <b>Environmental hazards:</b></li> <li>· <b>Marine pollutant:</b></li> </ul>                                | Product contains environmentally hazardous substances:<br>BISPHENOL A EPOXY RESIN<br>Yes<br>Symbol (fish and tree)     |
| <ul style="list-style-type: none"> <li>· <b>Special precautions for user</b></li> <li>· <b>EMS Number:</b></li> </ul>                                | Not applicable.<br>F-A,S-F   |
| <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> </ul>   |  |
| <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<br>Code: E1<br>Maximum net quantity per inner packaging: 30 ml<br>Maximum net quantity per outer packaging: 1000 ml |
| <ul style="list-style-type: none"> <li>· <b>UN "Model Regulation":</b></li> </ul>  | -  |

### 15 Regulatory information

|  |                                       |
|--|---------------------------------------|
| <ul style="list-style-type: none"> <li>· <b>Safety, health and environmental regulations/legislation specific for the substance or mixture</b></li> <li>· <b>Sara</b></li> </ul> |                                       |
| <ul style="list-style-type: none"> <li>· <b>Section 355 (extremely hazardous substances):</b></li> </ul>   | None of the ingredients is listed.    |
| <ul style="list-style-type: none"> <li>· <b>Section 313 (Specific toxic chemical listings):</b></li> </ul>   | 1344-28-1 aluminium oxide             |
| <ul style="list-style-type: none"> <li>· <b>TSCA (Toxic Substances Control Act):</b></li> </ul>  | All ingredients are listed.           |
| <ul style="list-style-type: none"> <li>· <b>Proposition 65</b></li> </ul>  |                                       |
| <ul style="list-style-type: none"> <li>· <b>Chemicals known to cause cancer:</b></li> </ul>  |                                       |
|  | 14808-60-7 Quartz (SiO <sub>2</sub> ) |
|  | 13463-67-7 titanium dioxide           |

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**Trade name: Epoxy CR-2100 Part A**

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**· 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)**

|            |                            |    |
|------------|----------------------------|----|
| 14808-60-7 | Quartz (SiO <sub>2</sub> ) | A2 |
| 1344-28-1  | aluminium oxide            | A4 |
| 1309-37-1  | diiron trioxide            | A4 |
| 13463-67-7 | titanium dioxide           | A4 |

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

|            |                            |
|------------|----------------------------|
| 14808-60-7 | Quartz (SiO <sub>2</sub> ) |
| 13463-67-7 | titanium dioxide           |

**· Product related hazard informations:**

The product has been classified and marked in accordance with directives on hazardous materials.

**· Hazard symbols:**


Irritant

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

Epoxy Resin - Proprietary  
1,4-bis(2,3-epoxypropoxy)butane

**· Risk phrases:**

Irritating to eyes and skin.  
May cause sensitisation by skin contact.

**· Safety phrases:**

Keep out of the reach of children.  
Avoid contact with skin and eyes.  
Wear suitable gloves and eye/face protection.  
If swallowed, seek medical advice immediately and show this container or label.  
Dispose of this material and its container to hazardous or special waste collection point.

**· Special labeling of certain preparations:**

Contains epoxy constituents. See information supplied by the manufacturer.

**· 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 SDS:** Environment protection department.

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**Trade name: Epoxy CR-2100 Part A**

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· **Contact:** Mr. Edward Poznysz, VP of Technologies: epoznysz@resindesigns.com

· **Date of preparation / last revision** 06/26/2015 / -

· **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

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

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)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A

Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

Carc. 1A: Carcinogenicity, Hazard Category 1A

US

### 1 Identification

- **Product identifier**
- **Trade name:** *Epoxy CR-2100 Part B*
- **Article number:** EP CR-2100 PT B
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
 AquaBond LLC  
 6444 E Spring St #275  
 Long Beach, CA 90815  
 USA
- **EMERGENCY PHONE:** For product emergency involving spill, leak, fire, exposure, or accident call CHEMTREC at (800) 424-9300. For all other inquires call AquaBond LLC at (714) 961-1420

### 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS08 Health hazard

- Muta. 2      H341 Suspected of causing genetic defects.  
 Carc. 1A      H350 May cause cancer.  
 STOT RE 2    H373 May cause damage to organs through prolonged or repeated exposure.



GHS05 Corrosion

- Skin Corr. 1B H314 Causes severe skin burns and eye damage.  
 Eye Dam. 1    H318 Causes serious eye damage.



GHS07

- Acute Tox. 4    H302 Harmful if swallowed.  
 Acute Tox. 4    H332 Harmful if inhaled.  
 Skin Sens. 1    H317 May cause an allergic skin reaction.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**



Toxic

Toxic by inhalation, in contact with skin and if swallowed.



Corrosive

Causes burns.



Harmful

Harmful: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed. Possible risk of irreversible effects.



Irritant

May cause sensitisation by skin contact.

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**Trade name: Epoxy CR-2100 Part B**

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· **Information concerning particular hazards for human and environment:**

The product has to be labeled due to the calculation procedure of international guidelines.

· **Classification system:**

The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

· **Label elements**

· **Labelling according to EU guidelines:**

The product has been classified and marked in accordance with directives on hazardous materials.

· **Code letter and hazard designation of product:**



Toxic

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

phenol

diethylenetriamine

Propan-1,3-diamine, n-[3-tridecycloxy)propyl]-, branched (adogen 583)

Dimethylamino(methyl)phenol

· **Risk phrases:**

Toxic by inhalation, in contact with skin and if swallowed.

Causes burns.

May cause sensitisation by skin contact.

Harmful: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed.

Possible risk of irreversible effects.

· **Safety phrases:**

Keep locked up and out of the reach of children.

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

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

Wear suitable protective clothing, gloves and eye/face protection.

In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

In case of accident by inhalation: remove casualty to fresh air and keep at rest.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 3

Fire = 1

Reactivity = 0

· **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.

US

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Trade name: *Epoxy CR-2100 Part B*

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### 3 Composition/information on ingredients

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

- **Dangerous components:**

|            |   |         |
|------------|---|---------|
| 14808-60-7 | Quartz (SiO <sub>2</sub> )  | 25-50%  |
| 108-95-2   | phenol  | 10-25%  |
| 111-40-0   | diethylenetriamine  | 2.5-10% |
|            | Propan-1,3-diamine, n-[3-tridecycloxy)propyl]-, branched (adogen 583) | ≤ 2.5%  |
| 25338-55-0 | Dimethylamino(methyl)phenol   | ≤ 2.5%  |

### 4 First-aid measures

- **Description of first aid measures**
- **General information:**  
Immediately remove any clothing soiled by the product.  
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.  
Remove breathing apparatus only after contaminated clothing have been completely removed.  
In case of irregular breathing or respiratory arrest provide artificial respiration.
- **After inhalation:**  
Supply fresh air or oxygen; call for 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. Then consult a doctor.
- **After swallowing:**  
Do not induce vomiting; immediately call for medical help.  
Drink copious amounts of water and provide fresh air. Immediately call a 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:** 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:** Mouth respiratory protective device.

### 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.

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**Trade name: Epoxy CR-2100 Part B**

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- **Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Use neutralizing agent.  
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**  
Ensure good ventilation/exhaustion at the workplace.  
Open and handle receptacle with care.  
Prevent formation of aerosols.
- **Information about protection against explosions and fires:** Keep respiratory protective device available.
- **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.

### 8 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:**

#### 14808-60-7 Quartz (SiO<sub>2</sub>)

|     |   |
|-----|---|
| PEL | see Quartz listing  |
| REL | Long-term value: 0.05* mg/m <sup>3</sup><br>*respirable dust; See Pocket Guide App. A |
| TLV | Long-term value: 0.025* mg/m <sup>3</sup><br>*as respirable fraction                  |

#### 108-95-2 phenol

|     |  |
|-----|--|
| PEL | Long-term value: 19 mg/m <sup>3</sup> , 5 ppm<br>Skin  |
| REL | Long-term value: 19 mg/m <sup>3</sup> , 5 ppm<br>Ceiling limit value: 60* mg/m <sup>3</sup> , 15.6* ppm<br>*15-min; Skin |
| TLV | Long-term value: 19 mg/m <sup>3</sup> , 5 ppm<br>Skin; BEI   |

#### 111-40-0 diethylenetriamine

|     |  |
|-----|--|
| REL | Long-term value: 4 mg/m <sup>3</sup> , 1 ppm<br>Skin |
|-----|--|

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|     |  |
|-----|--|
| TLV | Long-term value: 4.2 mg/m <sup>3</sup> , 1 ppm<br>Skin |
|-----|--|

· **Ingredients with biological limit values:**

**108-95-2 phenol**

|     |   |
|-----|---|
| BEI | 250 mg/g creatinine<br>Medium: urine<br>Time: end of shift<br>Parameter: Phenol with hydrolysis (background, nonspecific) |
|-----|---|

· **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.
- Store protective clothing separately.
- Avoid contact with the eyes and skin.

· **Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· **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:**

|               |                                    |
|---------------|------------------------------------|
| <b>Form:</b>  | Liquid                             |
| <b>Color:</b> | According to product specification |

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|   |   |
|---|---|
| · <b>Odor:</b>                                    | Characteristic                                |
| · <b>Odour threshold:</b>                         | Not determined.                               |
| · <b>pH-value:</b>                                | Not determined.                               |
| · <b>Change in condition</b>                      |   |
| <b>Melting point/Melting range:</b>               | Undetermined.                                 |
| <b>Boiling point/Boiling range:</b>               | > 200 °C (> 392 °F)                           |
| · <b>Flash point:</b>                             | 108 °C (226 °F)                               |
| · <b>Flammability (solid, gaseous):</b>           | Not applicable.                               |
| · <b>Ignition temperature:</b>                    | 595 °C (1103 °F)                              |
| · <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>                                     | 1.3 Vol %                                     |
| <b>Upper:</b>                                     | 9.5 Vol %                                     |
| · <b>Vapor pressure at 20 °C (68 °F):</b>         | 0.3 hPa                                       |
| · <b>Density at 20 °C (68 °F):</b>                | 1.55 g/cm <sup>3</sup> (12.935 lbs/gal)       |
| · <b>Relative density</b>                         | Not determined.                               |
| · <b>Vapour density</b>                           | Not determined.                               |
| · <b>Evaporation rate</b>                         | Not determined.                               |
| · <b>Solubility in / Miscibility with Water:</b>  | Not miscible or difficult to mix.             |
| · <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>                          | 18.1 %  |
| <b>VOC content:</b>                               | 18.1 %  |
|   | 280.6 g/l / 2.34 lb/gl                        |
| · <b>Other information</b>                        | No further relevant information available.    |

## 10 Stability and reactivity

- **Reactivity**
- **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.

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### 11 Toxicological information

- Information on toxicological effects
- Acute toxicity:

· LD/LC50 values that are relevant for classification:

#### 108-95-2 phenol

|        |      |                    |
|--------|------|--------------------|
| Oral   | LD50 | 317 mg/kg (rat)    |
| Dermal | LD50 | 850 mg/kg (rabbit) |

- Primary irritant effect:
- on the skin: Caustic effect on skin and mucous membranes.
- on the eye: Strong caustic effect.
- Sensitization: Sensitization possible through skin contact.

#### · Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations:

Toxic

Corrosive

Irritant

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

#### · Carcinogenic categories

#### · IARC (International Agency for Research on Cancer)

|            |                            |    |
|------------|----------------------------|----|
| 14808-60-7 | Quartz (SiO <sub>2</sub> ) | 1  |
| 108-95-2   | phenol                     | 3  |
| 1309-37-1  | diiron trioxide            | 3  |
| 13463-67-7 | titanium dioxide           | 2B |

#### · NTP (National Toxicology Program)

|            |                            |   |
|------------|----------------------------|---|
| 14808-60-7 | Quartz (SiO <sub>2</sub> ) | K |
|------------|----------------------------|---|

#### · OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

### 12 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:
  - Generally not hazardous for water
  - Must not reach bodies of water or drainage ditch undiluted or unneutralized.
- Results of PBT and vPvB assessment
- PBT: Not applicable.
- vPvB: Not applicable.
- Other adverse effects: No further relevant information available.

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### 13 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.

### 14 Transport information

|  |   |
|--|---|
| · <b>UN-Number</b>   |   |
| · <b>DOT, IMDG, IATA</b>   | UN1760  |
| · <b>UN proper shipping name</b>   |   |
| · <b>DOT</b>   | Corrosive liquids, n.o.s. (Alkyl ether amine, diethylenetriamine)                   |
| · <b>IMDG, IATA</b>  | CORROSIVE LIQUID, N.O.S. (Alkyl ether amine, diethylenetriamine)                    |
| · <b>Transport hazard class(es)</b>  |   |
| · <b>DOT</b>   |   |
|  |   |
| · <b>Class</b>   | 8 Corrosive substances  |
| · <b>Label</b>   | 8   |
| · <b>IMDG, IATA</b>  |   |
|  |  |
| · <b>Class</b>   | 8 Corrosive substances  |
| · <b>Label</b>   | 8   |
| · <b>Packing group</b>   |   |
| · <b>DOT, IMDG, IATA</b>   | III   |
| · <b>Environmental hazards:</b>  |   |
| · <b>Marine pollutant:</b>   | No  |
| · <b>Special precautions for user</b>  | Warning: Corrosive substances   |
| · <b>Danger code (Kemler):</b>   | 80  |
| · <b>EMS Number:</b>   | F-A,S-B   |
| · <b>Segregation groups</b>  | Alkalis   |
| · <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b> | Not applicable.   |
| · <b>Transport/Additional information:</b>                                       |   |
| · <b>DOT</b>   |   |
| · <b>Quantity limitations</b>  | On passenger aircraft/rail: 5 L<br>On cargo aircraft only: 60 L                     |

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|                                   |  |
|-----------------------------------|--|
| · <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>   | UN1760, Corrosive liquids, n.o.s. (Alkyl ether amine, diethylenetriamine), 8, III                                |

### 15 Regulatory information

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

#### · Section 355 (extremely hazardous substances):

|          |        |
|----------|--------|
| 108-95-2 | phenol |
|----------|--------|

#### · Section 313 (Specific toxic chemical listings):

|          |        |
|----------|--------|
| 108-95-2 | phenol |
|----------|--------|

|           |                 |
|-----------|-----------------|
| 1344-28-1 | aluminium oxide |
|-----------|-----------------|

#### · TSCA (Toxic Substances Control Act):

|                             |
|-----------------------------|
| All ingredients are listed. |
|-----------------------------|

#### · Proposition 65

##### · Chemicals known to cause cancer:

|            |                            |
|------------|----------------------------|
| 14808-60-7 | Quartz (SiO <sub>2</sub> ) |
|------------|----------------------------|

|            |                  |
|------------|------------------|
| 13463-67-7 | titanium dioxide |
|------------|------------------|

##### · 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)

|          |        |      |
|----------|--------|------|
| 108-95-2 | phenol | D, I |
|----------|--------|------|

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

|            |                            |    |
|------------|----------------------------|----|
| 14808-60-7 | Quartz (SiO <sub>2</sub> ) | A2 |
|------------|----------------------------|----|

|          |        |    |
|----------|--------|----|
| 108-95-2 | phenol | A4 |
|----------|--------|----|

|           |                 |    |
|-----------|-----------------|----|
| 1344-28-1 | aluminium oxide | A4 |
|-----------|-----------------|----|

|           |                 |    |
|-----------|-----------------|----|
| 1309-37-1 | diiron trioxide | A4 |
|-----------|-----------------|----|

|            |                  |    |
|------------|------------------|----|
| 13463-67-7 | titanium dioxide | A4 |
|------------|------------------|----|

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

|            |                            |
|------------|----------------------------|
| 14808-60-7 | Quartz (SiO <sub>2</sub> ) |
|------------|----------------------------|

|            |                  |
|------------|------------------|
| 13463-67-7 | titanium dioxide |
|------------|------------------|

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· **Product related hazard informations:**

The product has been classified and marked in accordance with directives on hazardous materials.

· **Hazard symbols:**



Toxic

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

phenol  
diethylenetriamine  
Propan-1,3-diamine, n-[3-tridecycloxy)propyl]-, branched (adogen 583)  
Dimethylamino(methyl)phenol

· **Risk phrases:**

Toxic by inhalation, in contact with skin and if swallowed.  
Causes burns.  
May cause sensitisation by skin contact.  
Harmful: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed.  
Possible risk of irreversible effects.

· **Safety phrases:**

Keep locked up and out of the reach of children.  
In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point.  
Wear suitable protective clothing, gloves and eye/face protection.  
In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).  
In case of accident by inhalation: remove casualty to fresh air and keep at rest.

· **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 SDS:** Environment protection department.
- **Contact:** Mr. Edward Poznysz, VP of Technologies: epoznysz@resindesigns.com
- **Date of preparation / last revision** 06/26/2015 / -

· **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  
DOT: US Department of Transportation  
IATA: International Air Transport Association  
ACGIH: American Conference of Governmental Industrial Hygienists  
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)  
NFPA: National Fire Protection Association (USA)  
HMIS: Hazardous Materials Identification System (USA)  
VOC: Volatile Organic Compounds (USA, EU)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent  
Acute Tox. 4: Acute toxicity, Hazard Category 4  
Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B  
Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1  
Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

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Muta. 2: Germ cell mutagenicity, Hazard Category 2  
Carc. 1A: Carcinogenicity, Hazard Category 1A  
STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2

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