1.1. Product identifier
Ceramic-Polymer XRC Part A

1.2. Relevant identified uses of the substance or mixture and uses advised against
Use of the substance/mixture
Coatings and paints, fillers, putties, thinners

Uses advised against
No data available

1.3. Details of the supplier of the safety data sheet
Company name: Chesterton International GmbH
Street: Am Lenzenfleck 23
Place: DE-85737 Ismaning GERMANY
Telephone: +49 89 99 65 46 - 0
Telefax: +49 89 99 65 46 - 50
e-mail: eu-sds@chesterton.com
e-mail (Contact person): eu-sds@chesterton.com
Internet: www.chesterton.com
Responsible Department: eu-sds@chesterton.com

1.4. Emergency telephone number:
+49(0) 551 - 1 92 40 (GIZ-Nord, 24h)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture
Regulation (EC) No. 1272/2008

Hazard categories:
Skin corrosion/irritation: Skin Corr. 1C
Serious eye damage/eye irritation: Eye Dam. 1
Respiratory or skin sensitisation: Skin Sens. 1
Germ cell mutagenicity: Muta. 2
Reproductive toxicity: Repr. 1B
Hazardous to the aquatic environment: Aquatic Chronic 2
Hazard Statements:
Causes severe skin burns and eye damage.
Causes serious eye damage.
May cause an allergic skin reaction.
Suspected of causing genetic defects.
May damage fertility.
Toxic to aquatic life with long lasting effects.

2.2. Label elements
Regulation (EC) No. 1272/2008
Safety Data Sheet

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Hazard components for labelling
Reaction mass of 1-(2,3-epoxypropoxy)-2,2-bis ((2,3-epoxypropoxy)methyl) butane and 1-(2,3-epoxypropoxy)-2-((2,3-epoxypropoxy)methyl)-2-hydroxy butane
Reaction mass of 2,2'-[methylenebis(4,1-phenylenoxymethylene)]dioxirane and 2-((2-[4-(oxiran-2-ylmethoxy)benzyl]phenoxy) methyl)oxirane and [2,2'-[methylenebis(2,1-phenylenoxymethylene)]dioxirane
Phenol, polymer with formaldehyde, glycidether

Signal word: Danger

Pictograms:

Hazard statements
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H341 Suspected of causing genetic defects.
H360F May damage fertility.
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P264 Wash hands thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER/doctor.

2.3. Other hazards
No information available.

SECTION 3: Composition/information on ingredients

3.2. Mixtures
Hazardous components

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Chemical name</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>EC No</td>
<td>Index No</td>
<td>REACH No</td>
</tr>
<tr>
<td>GHS Classification</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reaction mass of 1-(2,3-epoxypropoxy)-2,2-bis ((2,3-epoxypropoxy)methyl) butane and 1-(2,3-epoxypropoxy)-2-((2,3-epoxypropoxy)methyl)-2-hydroxy butane</td>
<td>25-30 %</td>
<td></td>
</tr>
<tr>
<td>701-135-4</td>
<td>01-212078341-60</td>
<td></td>
</tr>
<tr>
<td>Muta. 2, Repr. 1B, Skin Corr. 1C, Eye Dam. 1, Skin Sens. 1B, Aquatic Chronic 2; H341 H360F H314 H318 H317 H411</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reaction mass of 2,2'-[methylenebis(4,1-phenyleneoxymethylene)]dioxirane and [2-[(2-[(oxiran-2-ylmethoxy)benzyl]phenoxy)methyl]oxirane and [2,2'-[methylenebis(2,1-phenyleneoxymethylene)]dioxirane</td>
<td>25 - 30 %</td>
<td></td>
</tr>
<tr>
<td>701-263-0</td>
<td>01-2119454392-40</td>
<td></td>
</tr>
<tr>
<td>Skin Irrit. 2, Skin Sens. 1, Aquatic Chronic 2; H315 H317 H411</td>
<td></td>
<td></td>
</tr>
<tr>
<td>28064-14-4</td>
<td>Phenol, polymer with formaldehyde, glycidether</td>
<td>15-20 %</td>
</tr>
<tr>
<td>608-164-0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>75-93-3</td>
<td>butanone; ethyl methyl ketone</td>
<td>1-5 %</td>
</tr>
<tr>
<td>201-159-0</td>
<td>606-002-00-3</td>
<td>01-2119457290-43</td>
</tr>
<tr>
<td>Flam. Liq. 2, Eye Irrit. 2, STOT SE 3; H225 H319 H336 EUH066</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Full text of H and EUH statements: see section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information
Change contaminated, saturated clothing. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

After inhalation
In case of inhalation of decomposition products, affected person should be moved into fresh air and kept still.

After contact with skin
After contact with skin, wash immediately with plenty of water and soap. Seek medical advice immediately.
Do not wash with: Solvents/Thinner

After contact with eyes
After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

After ingestion
If accidentally swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention.
Do NOT induce vomiting.

4.2. Most important symptoms and effects, both acute and delayed
Immediate medical treatment required because corrosive injuries that are not treated are hard to cure.
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Symptoms may develop several hours following exposure; medical observation therefore necessary for at least 48 hours.

4.3. Indication of any immediate medical attention and special treatment needed

First Aid, decontamination, treatment of symptoms.
After contact with skin, wash immediately with plenty of Lutrol.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media
Dry extinguishing powder. Carbon dioxide (CO2). alcohol resistant foam. Water spray jet

Unsuitable extinguishing media
Full water jet

5.2. Special hazards arising from the substance or mixture
Carbon monoxide Carbon dioxide (CO2). Nitrogen oxides (NOx)

5.3. Advice for firefighters
Special protective equipment for firefighters Protective clothing. In case of fire: Wear self-contained breathing apparatus.
Co-ordinate fire-fighting measures to the fire surroundings.

Additional information
Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
See protective measures under point 7 and 8.
Provide adequate ventilation.
Personal protection equipment: see section 8
Remove persons to safety.

6.2. Environmental precautions
Do not allow to enter into surface water or drains. Cover drains. Adverse environmental effects

6.3. Methods and material for containment and cleaning up
Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

6.4. Reference to other sections
See protective measures under point 7 and 8.
Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Advice on safe handling
See section 8. Wear personal protection equipment (refer to section 8). Keep container tightly closed.
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Advice on protection against fire and explosion
Keep away from sources of heat (e.g. hot surfaces), sparks and open flames.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels
Keep container tightly closed in a cool, well-ventilated place. Keep/Store only in original container.

Hints on joint storage
Keep away from:
Food and feedingstuffs
Oxidising agent

Further information on storage conditions
Keep away from:
Frost
Heat
Humidity

7.3. Specific end use(s)
No information available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Substance</th>
<th>TWA (8 h) ppm</th>
<th>TWA (8 h) mg/m³</th>
<th>STEL (15 min) ppm</th>
<th>STEL (15 min) mg/m³</th>
<th>Category</th>
<th>Origin</th>
</tr>
</thead>
<tbody>
<tr>
<td>78-93-3</td>
<td>Butan-2-one (methyl ethyl ketone)</td>
<td>200</td>
<td>600</td>
<td>300</td>
<td>899</td>
<td>TWA (8 h)</td>
<td>WEL</td>
</tr>
</tbody>
</table>

Biological Monitoring Guidance Values (EH40)

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Substance</th>
<th>Parameter</th>
<th>Value</th>
<th>Test material</th>
<th>Sampling time</th>
</tr>
</thead>
<tbody>
<tr>
<td>78-93-3</td>
<td>Butan-2-one</td>
<td>butan-2-one</td>
<td>70 µmol/L</td>
<td>urine</td>
<td>Post shift</td>
</tr>
</tbody>
</table>
### DNEL/DMEL values

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Substance</th>
<th>Exposure route</th>
<th>Effect</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>28064-14-4</td>
<td>Phenol, polymer with formaldehyde, glycidether</td>
<td>inhalation</td>
<td>systemic</td>
<td>29.39 mg/m³</td>
</tr>
<tr>
<td>78-93-3</td>
<td>butanone; ethyl methyl ketone</td>
<td>dermal</td>
<td>systemic</td>
<td>29.39 mg/m³</td>
</tr>
<tr>
<td>Reaction mass of 1-(2,3-epoxypropoxy)-2,2-bis ((2,3-epoxypropoxy)methyl) butane and 1-(2,3-epoxypropoxy)-2-((2,3-epoxypropoxy)methyl)-2-hydroxy butane</td>
<td>Worker DNEL, long-term</td>
<td>dermal</td>
<td>systemic</td>
<td>104.15 mg/kg bw/day</td>
</tr>
<tr>
<td>Reaction mass of 2,2'-[methylenebis(4,1-phenyleneoxymethylene)]dioxirane and [2-(2-(4-(oxiran-2-y1methoxy)benzyl)phenoxy)methyl]oxirane and [2,2'-(methylenebis(2,1-phenyleneoxymethylene)]dioxirane</td>
<td>Worker DNEL, long-term</td>
<td>dermal</td>
<td>systemic</td>
<td>7.5 mg/kg bw/day</td>
</tr>
<tr>
<td>5089-36-4</td>
<td>reaction mass of 2,2'-[methylenebis(4,1-phenyleneoxymethylene)]dioxirane and 2-(2-(4-(oxiran-2-y1methoxy)benzyl)phenoxy)methyl]oxirane and 2,2'-[methylenebis(2,1-phenyleneoxymethylene)]dioxirane</td>
<td>Worker DNEL, long-term</td>
<td>dermal</td>
<td>systemic</td>
</tr>
<tr>
<td>28064-14-4</td>
<td>Phenol, polymer with formaldehyde, glycidether</td>
<td>dermal</td>
<td>systemic</td>
<td>104.15 mg/kg bw/day</td>
</tr>
<tr>
<td>78-93-3</td>
<td>butanone; ethyl methyl ketone</td>
<td>dermal</td>
<td>systemic</td>
<td>412 mg/kg bw/day</td>
</tr>
<tr>
<td>28064-14-4</td>
<td>Phenol, polymer with formaldehyde, glycidether</td>
<td>dermal</td>
<td>systemic</td>
<td>412 mg/kg bw/day</td>
</tr>
<tr>
<td>78-93-3</td>
<td>butanone; ethyl methyl ketone</td>
<td>dermal</td>
<td>systemic</td>
<td>106 mg/m³</td>
</tr>
<tr>
<td>Worker DNEL, long-term</td>
<td>inhalation</td>
<td>systemic</td>
<td>600 mg/m³</td>
<td></td>
</tr>
<tr>
<td>Worker DNEL, long-term</td>
<td>dermal</td>
<td>systemic</td>
<td>1161 mg/kg bw/day</td>
<td></td>
</tr>
</tbody>
</table>
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PNEC values

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Substance</th>
<th>Environmental compartment</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Reaction mass of 1-(2,3-epoxypropoxy)-2,2-bis ((2,3-epoxypropoxy)methyl) butane and 1-(2,3-epoxypropoxy)-2-((2,3-epoxypropoxy)methyl)-2-hydroxy butane</td>
<td>Freshwater</td>
<td>0,004 mg/l</td>
</tr>
<tr>
<td></td>
<td>Reaction mass of 2,2'-[methylenebis(4,1-phenyleneoxymethylene)]dioxirane and [2-((2-[4-(oxiran-2-ylmethoxy)benzyl]phenoxo)methyl)dioxirane and [2,2'-[methylenebis(2,1-phenyleneoxymethylene)]dioxirane</td>
<td>Freshwater</td>
<td>0,003 mg/l</td>
</tr>
<tr>
<td></td>
<td>Reaction mass of 2,2'-[methylenebis(4,1-phenyleneoxymethylene)]dioxirane and [2-((2-[4-(oxiran-2-ylmethoxy)benzyl]phenoxo)methyl)dioxirane and [2,2'-[methylenebis(2,1-phenyleneoxymethylene)]dioxirane</td>
<td>Freshwater sediment</td>
<td>0,029 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Reaction mass of 2,2'-[methylenebis(4,1-phenyleneoxymethylene)]dioxirane and [2-((2-[4-(oxiran-2-ylmethoxy)benzyl]phenoxo)methyl)dioxirane and [2,2'-[methylenebis(2,1-phenyleneoxymethylene)]dioxirane</td>
<td>Marine sediment</td>
<td>0,002 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Reaction mass of 2,2'-[methylenebis(4,1-phenyleneoxymethylene)]dioxirane and [2-((2-[4-(oxiran-2-ylmethoxy)benzyl]phenoxo)methyl)dioxirane and [2,2'-[methylenebis(2,1-phenyleneoxymethylene)]dioxirane</td>
<td>Soil</td>
<td>0,002 mg/kg</td>
</tr>
<tr>
<td>78-93-3</td>
<td>butanone; ethyl methyl ketone</td>
<td>Freshwater</td>
<td>55,8 mg/l</td>
</tr>
<tr>
<td></td>
<td>butanone; ethyl methyl ketone</td>
<td>Freshwater (intermittent releases)</td>
<td>55,8 mg/l</td>
</tr>
<tr>
<td></td>
<td>butanone; ethyl methyl ketone</td>
<td>Marine water</td>
<td>55,8 mg/l</td>
</tr>
<tr>
<td></td>
<td>butanone; ethyl methyl ketone</td>
<td>Freshwater sediment</td>
<td>284,74 mg/kg</td>
</tr>
<tr>
<td></td>
<td>butanone; ethyl methyl ketone</td>
<td>Marine sediment</td>
<td>284,7 mg/kg</td>
</tr>
<tr>
<td></td>
<td>butanone; ethyl methyl ketone</td>
<td>Secondary poisoning</td>
<td>1000 mg/kg</td>
</tr>
<tr>
<td></td>
<td>butanone; ethyl methyl ketone</td>
<td>Micro-organisms in sewage treatment plants (STP)</td>
<td>709 mg/l</td>
</tr>
<tr>
<td></td>
<td>butanone; ethyl methyl ketone</td>
<td>Soil</td>
<td>22,5 mg/kg</td>
</tr>
</tbody>
</table>

8.2. Exposure controls

Appropriate engineering controls
Provide adequate ventilation as well as local exhaustion at critical locations.

Protective and hygiene measures
Work in well-ventilated zones or use proper respiratory protection. Only wear fitting, comfortable and clean protective clothing. Avoid contact with skin, eyes and clothes. Wash hands and face before breaks and after work and take a shower if necessary.

Eye/face protection
Suitable eye protection:
- Eye glasses with side protection
- Goggles

Hand protection
Tested protective gloves must be worn: EN ISO 374
NBR (Nitrile rubber), Butyl caoutchouc (butyl rubber)
Wearing time with permanent contact: Thickness of the glove material: >= 0,4 mm, Breakthrough time (maximum wearing time): >480 min
Wearing time with occasional contact (splashes): Thickness of the glove material: >= 0,1 mm, Breakthrough time (maximum wearing time) > 30 min
For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.
Breakthrough times and swelling properties of the material must be taken into consideration.

Skin protection
Protective clothing

Respiratory protection
If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn.
Combination filtering device (EN 14387) A-P3
Self-contained respirator (breathing apparatus) (DIN EN 133)

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Physical state:</th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colour:</td>
<td>black</td>
</tr>
<tr>
<td>Odour:</td>
<td>characteristic</td>
</tr>
<tr>
<td>pH-Value:</td>
<td>No data available</td>
</tr>
</tbody>
</table>

Changes in the physical state

| Melting point:          | No data available |
| Initial boiling point and boiling range: | No data available |
| Sublimation point:      | No data available |
| Softening point:        | No data available |
| Pour point:             | No data available |
| Flash point:            | > 100 °C |

Flammability
- Solid: No data available
- Gas: No data available

Explosive properties
- No information available.

Lower explosion limits: No data available
Upper explosion limits: No data available
Ignition temperature: No data available

Auto-ignition temperature
- Solid: No data available
- Gas: No data available
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No data available

Decomposition temperature: No data available

Oxidizing properties
No information available.

Vapour pressure: No data available
Density (at 20 °C): ~1,3 g/cm³
Water solubility: No data available

Solubility in other solvents
No information available.

Partition coefficient: No data available
Viscosity / dynamic: No data available
Vapour density: No data available
Evaporation rate: No data available

9.2. Other information
No information available.

SECTION 10: Stability and reactivity

10.1. Reactivity
The product is stable under storage at normal ambient temperatures.

10.2. Chemical stability
The substance is chemically stable under recommended conditions of storage, use and temperature.

10.3. Possibility of hazardous reactions
Exothermic reaction with: Acid, Oxidising agent

10.4. Conditions to avoid
Keep away from sources of heat (e.g. hot surfaces), sparks and open flames.

10.5. Incompatible materials
Acid, Oxidising agent

10.6. Hazardous decomposition products
Does not decompose when used for intended uses.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity
Based on available data, the classification criteria are not met.
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<table>
<thead>
<tr>
<th>CAS No</th>
<th>Chemical name</th>
<th>Exposure route</th>
<th>Dose</th>
<th>Species</th>
<th>Source</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Reaction mass of 1-(2,3-epoxypropoxy)-2,2-bis ((2,3-epoxypropoxy)methyl) butane and 1-(2,3-epoxypropoxy)-2-((2,3-epoxypropoxy)methyl)-2-hydroxy butane</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>oral</td>
<td>LD50</td>
<td>3398</td>
<td>Rat Other company data (1976)</td>
<td>OECD Guideline 401</td>
</tr>
<tr>
<td></td>
<td></td>
<td>dermal</td>
<td>LD50</td>
<td>&gt; 3170</td>
<td>Rat Study report (1976)</td>
<td>OECD Guideline 402</td>
</tr>
<tr>
<td>28064-14-4</td>
<td>Phenol, polymer with formaldehyde, glycidether</td>
<td>oral</td>
<td>LD50</td>
<td>&gt;2000</td>
<td>Rat Supplier</td>
<td></td>
</tr>
<tr>
<td>78-93-3</td>
<td>butanone; ethyl methyl ketone</td>
<td>oral</td>
<td>LD50</td>
<td>&gt;2000</td>
<td>Rat Supplier</td>
<td>OECD 423</td>
</tr>
<tr>
<td></td>
<td></td>
<td>dermal</td>
<td>LD50</td>
<td>6400 - 8000 mg/kg</td>
<td>Rabbit Supplier</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>inhalation (4 h) aerosol</td>
<td>LC50</td>
<td>34.5 mg/l</td>
<td>Rat</td>
<td></td>
</tr>
</tbody>
</table>

Irritation and corrosivity
Causes severe skin burns and eye damage.
Causes serious eye damage.

Sensitising effects
May cause an allergic skin reaction. (Reaction mass of 1-(2,3-epoxypropoxy)-2,2-bis ((2,3-epoxypropoxy)methyl) butane and 1-(2,3-epoxypropoxy)-2-((2,3-epoxypropoxy)methyl)-2-hydroxy butane; Reaction mass of 2,2’-[methylenebis(4,1-phenyleneoxymethylene)]dioxirane and [2-{[2-{4-(oxiran-2-ylmethoxy)benzyl]phenoxy} methyl]oxirane and [2,2’-[methylenebis(2,1-phenyleneoxymethylene)]dioxirane; Phenol, polymer with formaldehyde, glycidether)

Carcinogenic/mutagenic/toxic effects for reproduction
Suspected of causing genetic defects. (Reaction mass of 1-(2,3-epoxypropoxy)-2,2-bis ((2,3-epoxypropoxy)methyl) butane and 1-(2,3-epoxypropoxy)-2-((2,3-epoxypropoxy)methyl)-2-hydroxy butane; May damage fertility. (Reaction mass of 1-(2,3-epoxypropoxy)-2,2-bis ((2,3-epoxypropoxy)methyl) butane and 1-(2,3-epoxypropoxy)-2-((2,3-epoxypropoxy)methyl)-2-hydroxy butane)
Carcinogenicity: Based on available data, the classification criteria are not met.

STOT-single exposure
Based on available data, the classification criteria are not met.

STOT-repeated exposure
Based on available data, the classification criteria are not met.

Aspiration hazard
Based on available data, the classification criteria are not met.

SECTION 12: Ecological information
### 12.1. Toxicity

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Chemical name</th>
<th>Dose</th>
<th>[h]</th>
<th>[d]</th>
<th>Species</th>
<th>Source</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Aquatice toxicity</strong></td>
<td>LC50</td>
<td>75 mg/l</td>
<td>96 h</td>
<td>Cyprinus carpio</td>
<td>Study report (1996)</td>
<td>OECD Guideline 203</td>
</tr>
<tr>
<td></td>
<td><strong>Acute algeae toxicity</strong></td>
<td>ErC50</td>
<td>9 mg/l</td>
<td>72 h</td>
<td>Pseudokirchneriella subcapitata</td>
<td>Study report (2014)</td>
<td>OECD Guideline 201</td>
</tr>
<tr>
<td></td>
<td><strong>Acute crustacea toxicity</strong></td>
<td>EC50</td>
<td>3.7 mg/l</td>
<td>48 h</td>
<td>Daphnia magna</td>
<td>Study report (2015)</td>
<td>OECD Guideline 202</td>
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<tr>
<td></td>
<td><strong>Phenol, polymer with formaldehyde, glycidether</strong></td>
<td>LC50</td>
<td>2.54 mg/l</td>
<td>96 h</td>
<td>Leuciscus idus (golden orfe)</td>
<td>Supplier</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Acute crustacea toxicity</strong></td>
<td>EC50</td>
<td>2.55 mg/l</td>
<td>48 h</td>
<td>Daphnia magna (Big water flea)</td>
<td>Supplier</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>butanone; ethyl methyl ketone</strong></td>
<td>LC50</td>
<td>2993 mg/l</td>
<td>96 h</td>
<td>Pimephales promelas</td>
<td>Study report (1998)</td>
<td>OECD Guideline 203</td>
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<td></td>
<td><strong>Acute algeae toxicity</strong></td>
<td>ErC50</td>
<td>2029 mg/l</td>
<td>96 h</td>
<td>Pseudokirchneriella subcapitata</td>
<td>Study report (1998)</td>
<td>OECD Guideline 201</td>
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<td></td>
<td><strong>Acute crustacea toxicity</strong></td>
<td>EC50</td>
<td>308 mg/l</td>
<td>48 h</td>
<td>Daphnia magna</td>
<td>Study report (1998)</td>
<td>OECD Guideline 202</td>
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<td></td>
<td><strong>Acute bacteria toxicity</strong></td>
<td>(1150 mg/l)</td>
<td></td>
<td></td>
<td>Pseudomonas putida</td>
<td>Supplier</td>
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### 12.2. Persistence and degradability

No information available.

<table>
<thead>
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<th>CAS No</th>
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<th>Method</th>
<th>Value</th>
<th>d</th>
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<td><strong>Evaluation</strong></td>
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<td></td>
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<tr>
<td>78-93-3</td>
<td>butanone; ethyl methyl ketone</td>
<td>OECD 301</td>
<td>98%</td>
<td>28</td>
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</tr>
</tbody>
</table>

Readily biodegradable (according to OECD criteria).

### 12.3. Bioaccumulative potential

No information available.

**Partition coefficient n-octanol/water**

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Chemical name</th>
<th>Log Pow</th>
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<tbody>
<tr>
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<td><strong>Reaction mass of 1-(2,3-epoxypropoxy)-2,2-bis ((2,3-epoxypropoxy)methyl) butane and 1-(2,3-epoxypropoxy)-2-((2,3-epoxypropoxy)methyl)-2-hydroxy butane</strong></td>
<td>2.93 - 2530</td>
</tr>
<tr>
<td>78-93-3</td>
<td>butanone; ethyl methyl ketone</td>
<td>0.3</td>
</tr>
</tbody>
</table>

### 12.4. Mobility in soil

No information available.
12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Dispose of waste according to applicable legislation.

Contaminated packaging

Non-contaminated packages may be recycled. Dispose of waste according to applicable legislation.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number: UN 1760

14.2. UN proper shipping name: CORROSIVE LIQUID, N.O.S. (Reaction mass of 1-(2,3-epoxypropoxy)-2,2-bis ((2,3-epoxypropoxy)methyl) butane and 1-(2,3-epoxypropoxy)-2-((2,3-epoxypropoxy)methyl)-2-hydroxy butane)

14.3. Transport hazard class(es): 8

14.4. Packing group: III

Hazard label: 8

Classification code: C9

Special Provisions: 274

Limited quantity: 5 L

Excepted quantity: E1

Transport category: 3

Hazard No: 80

Tunnel restriction code: E

Inland waterways transport (ADN)

14.1. UN number: UN 1760

14.2. UN proper shipping name: CORROSIVE LIQUID, N.O.S. (Reaction mass of 1-(2,3-epoxypropoxy)-2,2-bis ((2,3-epoxypropoxy)methyl) butane and 1-(2,3-epoxypropoxy)-2-((2,3-epoxypropoxy)methyl)-2-hydroxy butane)

14.3. Transport hazard class(es): 8

14.4. Packing group: III

Hazard label: 8

Classification code: C9

Special Provisions: 274

Limited quantity: 5 L

Excepted quantity: E1

Marine transport (IMDG)
14.1. UN number: UN 1760
14.2. UN proper shipping name: CORROSIVE LIQUID, N.O.S. (Reaction mass of 1-(2,3-epoxypropoxy)-2,2-bis ((2,3-epoxypropoxy)methyl) butane and 1-(2,3-epoxypropoxy)-2-((2,3-epoxypropoxy)methyl)-2-hydroxy butane)

14.3. Transport hazard class(es): 8
14.4. Packing group: III
Hazard label: 8
Marine pollutant: P
Special Provisions: 223, 274
Limited quantity: 5 L
Excepted quantity: E1
EmS: F-A, S-B
Segregation group: alkalis

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number: UN 1760
14.2. UN proper shipping name: CORROSIVE LIQUID, N.O.S. (Reaction mass of 1-(2,3-epoxypropoxy)-2,2-bis ((2,3-epoxypropoxy)methyl) butane and 1-(2,3-epoxypropoxy)-2-((2,3-epoxypropoxy)methyl)-2-hydroxy butane)

14.3. Transport hazard class(es): 8
14.4. Packing group: III
Hazard label: 8
Special Provisions: A3 A803
Limited quantity Passenger: 1 L
Passenger LQ: Y841
Excepted quantity: E1
IATA-packing instructions - Passenger: 852
IATA-max. quantity - Passenger: 5 L
IATA-packing instructions - Cargo: 856
IATA-max. quantity - Cargo: 60 L

14.5. Environmental hazards
ENVIRONMENTALLY HAZARDOUS: yes
Danger releasing substance: epoxy resin

14.6. Special precautions for user
No information available.

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code
No information available.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
EU regulatory information
Safety Data Sheet

according to Regulation (EC) No 1907/2006

Ceramic-Polymer XRC Part A

Revision date: 06.12.2019

Information according to 2012/18/EU (SEVESO III):

E2 Hazardous to the Aquatic Environment

National regulatory information

Employment restrictions:

Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers. Observe employment restrictions for women of child-bearing age.

Water contaminating class (D):

15.2. Chemical safety assessment

For the following substances of this mixture a chemical safety assessment has been carried out:

- Reaction mass of 1-(2,3-epoxypropoxy)-2,2-bis ((2,3-epoxypropoxy)methyl) butane and 1-(2,3-epoxypropoxy)-2-((2,3-epoxypropoxy)methyl)-2-hydroxy butane
- Reaction mass of 2,2'-[methylenebis(4,1-phenyleneoxymethylene)]dioxirane and [2-((2-[4-(oxiran-2-ylmethoxy)benzyl]phenoxy) methyl)oxirane and [2,2'-[methylenebis(2,1-phenyleneoxymethylene)]dioxirane
- butanone; ethyl methyl ketone

SECTION 16: Other information

Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route
(R European Agreement concerning the International Carriage of Dangerous Goods by Road)
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer
(Regulations Concerning the International Transport of Dangerous Goods by Rail)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
ICAO: International Civil Aviation Organization
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)
CLP: Classification, labelling and Packaging
REACH: Registration, Evaluation and Authorization of Chemicals
GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals
UN: United Nations
CAS: Chemical Abstracts Service
DNEL: Derived No Effect Level
DMEL: Derived Minimal Effect Level
PNEC: Predicted No Effect Concentration
ATE: Acute toxicity estimate
LC50: Lethal concentration, 50%
LD50: Lethal dose, 50%
LL50: Lethal loading, 50%
EL50: Effect loading, 50%
EC50: Effective Concentration 50%
ErC50: Effective Concentration 50%, growth rate
NOEC: No Observed Effect Concentration
Safety Data Sheet

according to Regulation (EC) No 1907/2006

Ceramic-Polymer XRC Part A

Revision date: 06.12.2019

<table>
<thead>
<tr>
<th>Classification</th>
<th>Classification procedure</th>
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</thead>
<tbody>
<tr>
<td>Skin Corr. 1C; H314</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Eye Dam. 1; H318</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Skin Sens. 1; H317</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Muta. 2; H341</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Repr. 1B; H360F</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Aquatic Chronic 2; H411</td>
<td>Calculation method</td>
</tr>
</tbody>
</table>

Relevant H and EUH statements (number and full text)

H225 Highly flammable liquid and vapour.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
H341 Suspected of causing genetic defects.
H360F May damage fertility.
H411 Toxic to aquatic life with long lasting effects.
EUH066 Repeated exposure may cause skin dryness or cracking.

Further Information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)