SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier
Ceramic-Polymer STP-ep Part B

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:
- Acute toxicity: Acute Tox. 4
- Acute toxicity: Acute Tox. 4
- Skin corrosion/irritation: Skin Corr. 1
- Serious eye damage/eye irritation: Eye Dam. 1
- Respiratory or skin sensitisation: Skin Sens. 1
- Hazardous to the aquatic environment: Aquatic Chronic 3

Hazard Statements:
- Harmful if swallowed.
- Harmful if inhaled.
- Causes severe skin burns and eye damage.
- Causes serious eye damage.
- May cause an allergic skin reaction.
- Harmful to aquatic life with long lasting effects.

2.2. Label elements

Regulation (EC) No. 1272/2008
Hazard components for labelling
benzyl alcohol
3-aminomethyl-3,5,5-trimethylcyclohexylamine
m-phenylenebis(methylene)
3-aminopropyltriethoxysilane

Signal word: Danger

Pictograms:

Hazard statements
H302+H332 Harmful if swallowed or if inhaled.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H412 Harmful 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>
<th>EC No</th>
<th>Index No</th>
<th>REACH No</th>
<th>GHS Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>100-51-6</td>
<td>benzyl alcohol</td>
<td>25-33 %</td>
<td>202-859-9</td>
<td>603-057-00-5</td>
<td>01-2119492630-38</td>
<td>Acute Tox. 4, Acute Tox. 4, Eye Irrit. 2; H332 H302 H319</td>
</tr>
<tr>
<td>2855-13-2</td>
<td>3-aminomethyl-3,5,5-trimethylcyclohexylamine</td>
<td>16-23 %</td>
<td>220-666-8</td>
<td>612-067-00-9</td>
<td>01-2119514687-32</td>
<td>Acute Tox. 4, Acute Tox. 4, Skin Corr. 1B, Skin Sens. 1, Aquatic Chronic 3; H312 H302 H314 H317 H412</td>
</tr>
<tr>
<td>1477-55-0</td>
<td>m-phenylenebis(methylamine)</td>
<td>12-22 %</td>
<td>216-032-5</td>
<td>01-2119480150-50</td>
<td></td>
<td>Acute Tox. 4, Acute Tox. 4, Skin Corr. 1B, Skin Sens. 1, Aquatic Chronic 3; H332 H302 H314 H317 H412 EUH071</td>
</tr>
<tr>
<td>135470-04-1</td>
<td>1,3-Benzenedimethanamine,reaction products with epichlorohydrin</td>
<td>5-10 %</td>
<td>213-048-4</td>
<td>612-108-00-0</td>
<td>01-2119480479-24</td>
<td></td>
</tr>
<tr>
<td>919-30-2</td>
<td>3-aminopropytriethoxysilane</td>
<td>0,5 - 2 %</td>
<td>202-859-9</td>
<td>603-057-00-5</td>
<td>01-2119492630-38</td>
<td>Acute Tox. 4, Skin Corr. 1B; H302 H314</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.
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.
Safety Data Sheet

Ceramic-Polymer STP-ep Part B

Revision date: 09.01.2020

7.2. Conditions for safe storage, including any incompatibilities

Advice on protection against fire and explosion
Keep away from sources of heat (e.g. hot surfaces), sparks and open flames.

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
### DNEL/DMEL values

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Substance</th>
<th>DNEL type</th>
<th>Exposure route</th>
<th>Effect</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>100-51-6</td>
<td>benzyl alcohol</td>
<td>Worker DNEL, long-term</td>
<td>inhalation</td>
<td>systemic</td>
<td>22 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Worker DNEL, acute</td>
<td>inhalation</td>
<td>systemic</td>
<td>110 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Worker DNEL, long-term</td>
<td>dermal</td>
<td>systemic</td>
<td>8 mg/kg bw/day</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Worker DNEL, acute</td>
<td>dermal</td>
<td>systemic</td>
<td>40 mg/kg bw/day</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Consumer DNEL, long-term</td>
<td>inhalation</td>
<td>systemic</td>
<td>5,4 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Consumer DNEL, acute</td>
<td>inhalation</td>
<td>systemic</td>
<td>27 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Consumer DNEL, long-term</td>
<td>dermal</td>
<td>systemic</td>
<td>4 mg/kg bw/day</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Consumer DNEL, acute</td>
<td>dermal</td>
<td>systemic</td>
<td>20 mg/kg bw/day</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Consumer DNEL, long-term</td>
<td>oral</td>
<td>systemic</td>
<td>4 mg/kg bw/day</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Consumer DNEL, acute</td>
<td>oral</td>
<td>systemic</td>
<td>20 mg/kg bw/day</td>
</tr>
<tr>
<td>2855-13-2</td>
<td>3-aminomethyl-3,5,5-trimethylcyclohexylamine</td>
<td>Worker DNEL, long-term</td>
<td>inhalation</td>
<td>local</td>
<td>0,073 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Worker DNEL, acute</td>
<td>inhalation</td>
<td>local</td>
<td>0,073 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Consumer DNEL, long-term</td>
<td>oral</td>
<td>systemic</td>
<td>0,526 mg/kg bw/day</td>
</tr>
<tr>
<td>1477-55-0</td>
<td>m-phenylenebis(methylamine)</td>
<td>Worker DNEL, long-term</td>
<td>dermal</td>
<td>systemic</td>
<td>0,33 mg/kg bw/day</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Worker DNEL, long-term</td>
<td>inhalation</td>
<td>local</td>
<td>0,2 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Worker DNEL, long-term</td>
<td>inhalation</td>
<td>systemic</td>
<td>1,2 mg/m³</td>
</tr>
<tr>
<td>919-30-2</td>
<td>3-aminopropytriethoxysilane</td>
<td>Worker DNEL, long-term</td>
<td>inhalation</td>
<td>systemic</td>
<td>59 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Worker DNEL, acute</td>
<td>inhalation</td>
<td>systemic</td>
<td>59 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Worker DNEL, long-term</td>
<td>dermal</td>
<td>systemic</td>
<td>8,3 mg/kg bw/day</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Worker DNEL, acute</td>
<td>dermal</td>
<td>systemic</td>
<td>8,3 mg/kg bw/day</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Consumer DNEL, long-term</td>
<td>inhalation</td>
<td>systemic</td>
<td>17,4 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Consumer DNEL, acute</td>
<td>inhalation</td>
<td>systemic</td>
<td>17,4 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Consumer DNEL, long-term</td>
<td>dermal</td>
<td>systemic</td>
<td>5 mg/kg bw/day</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Consumer DNEL, acute</td>
<td>dermal</td>
<td>systemic</td>
<td>5 mg/kg bw/day</td>
</tr>
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</table>
### PNEC values

<table>
<thead>
<tr>
<th>Substance</th>
<th>CAS No</th>
<th>Environmental compartment</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzyl alcohol</td>
<td>100-51-6</td>
<td>Freshwater</td>
<td>1 mg/l</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Freshwater (intermittent releases)</td>
<td>2.3 mg/l</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Marine water</td>
<td>0.1 mg/l</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Freshwater sediment</td>
<td>5.27 mg/kg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Marine sediment</td>
<td>0.527 mg/kg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Micro-organisms in sewage treatment plants (STP)</td>
<td>39 mg/l</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Soil</td>
<td>0.456 mg/kg</td>
</tr>
<tr>
<td>3-aminoethyl-3,5,5-trimethylcyclohexylamine</td>
<td>2855-13-2</td>
<td>Freshwater</td>
<td>0.06 mg/l</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Freshwater (intermittent releases)</td>
<td>0.23 mg/l</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Marine water</td>
<td>0.006 mg/l</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Freshwater sediment</td>
<td>5.784 mg/kg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Marine sediment</td>
<td>0.578 mg/kg</td>
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<tr>
<td></td>
<td></td>
<td>Micro-organisms in sewage treatment plants (STP)</td>
<td>3.18 mg/l</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Soil</td>
<td>1.121 mg/kg</td>
</tr>
<tr>
<td>m-phenylenebis(methylamine)</td>
<td>1477-55-0</td>
<td>Freshwater</td>
<td>0.094 mg/l</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Freshwater (intermittent releases)</td>
<td>0.152 mg/l</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Marine water</td>
<td>0.009 mg/l</td>
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<tr>
<td></td>
<td></td>
<td>Freshwater sediment</td>
<td>12.4 mg/kg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Marine sediment</td>
<td>1.24 mg/kg</td>
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<td></td>
<td></td>
<td>Micro-organisms in sewage treatment plants (STP)</td>
<td>10 mg/l</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Soil</td>
<td>2.44 mg/kg</td>
</tr>
<tr>
<td>3-aminopropyltriethoxysilane</td>
<td>919-30-2</td>
<td>Freshwater</td>
<td>0.33 mg/l</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Freshwater (intermittent releases)</td>
<td>3.3 mg/l</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Marine water</td>
<td>0.033 mg/l</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Freshwater sediment</td>
<td>1.2 mg/kg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Marine sediment</td>
<td>0.12 mg/kg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Micro-organisms in sewage treatment plants (STP)</td>
<td>13 mg/l</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Soil</td>
<td>0.05 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

| Physical state: | Liquid |
| Colour: | light yellow |
| Odour: | like amines |
| pH-Value: | ~11 |

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: | >65 °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
- Decomposition temperature: No data available

Oxidizing properties
- No information available.
- Vapour pressure: No data available
  - (at 25 °C)
- Density (at 23 °C): ca. 1.04 g/cm³
- Water solubility: partially soluble

Solubility in other solvents
- No information available.
- Partition coefficient: No data available
- Viscosity / dynamic: ca. 100 mPa·s
- 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

Harmful if swallowed.
Harmful if inhaled.

ATEmix calculated

ATE (oral) 1831.5 mg/kg; ATE (inhalation aerosol) 3,297 mg/l

<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>100-51-6</td>
<td>benzyl alcohol</td>
<td>oral</td>
<td>LD50</td>
<td>1580</td>
<td>Mouse</td>
<td>Cosmet. Toxicol. 11, 1011-1013 (1973) (1 OECD Guideline 401</td>
</tr>
<tr>
<td></td>
<td></td>
<td>inhalation vapour</td>
<td>ATE</td>
<td>11 mg/l</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>inhalation (4 h) aerosol</td>
<td>LC50</td>
<td>&gt;4,178</td>
<td>Rat</td>
<td>ECHA OECD 403</td>
</tr>
<tr>
<td>2855-13-2</td>
<td>3-aminomethyl-3,5,5-trimethylcyclohexylamine</td>
<td>oral</td>
<td>LD50</td>
<td>1030</td>
<td>Rat</td>
<td>Study report (1965) OECD Guideline 401</td>
</tr>
<tr>
<td>1477-55-0</td>
<td>m-phenylenebis(methylamine)</td>
<td>oral</td>
<td>LD50</td>
<td>930</td>
<td>Rat</td>
<td>Study report (1973) OECD Guideline 401</td>
</tr>
<tr>
<td></td>
<td></td>
<td>dermal</td>
<td>LD50</td>
<td>&gt; 3100</td>
<td>Rat</td>
<td>Study report (1975) TK 11813 was applied to a shaved area of</td>
</tr>
<tr>
<td></td>
<td></td>
<td>inhalation vapour</td>
<td>ATE</td>
<td>11 mg/l</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>inhalation (4 h) aerosol</td>
<td>LC50</td>
<td>1,34 mg/l</td>
<td>Rat</td>
<td></td>
</tr>
<tr>
<td>919-30-2</td>
<td>3-aminopropyltriethoxysilane</td>
<td>oral</td>
<td>LD50</td>
<td>530</td>
<td>Mouse</td>
<td>Study report (1972) No details of a guideline and only limit</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. (3-aminomethyl-3,5,5-trimethylcyclohexylamine; m-phenylenebis(methylamine))

Carcinogenic/mutagenic/toxic effects for reproduction
   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
**Aquatic toxicity** | **Dose** | **[h] [d]** | **Species** | **Source** | **Method**
---|---|---|---|---|---
**benzyl alcohol**<br>100-51-6 | Acute fish toxicity<br>LC50 100 mg/l | > 100 | 96 h | Oryzias latipes | Review article or handbook (2009) | OECD Guideline 203
| Acute algae toxicity<br>ErC50 770 mg/l | 72 h | Pseudokirchneriella subcapitata | Review article or handbook (2009) | OECD Guideline 201
| Acute crustacea toxicity<br>EC50 230 mg/l | 48 h | Daphnia magna | Review article or handbook (2009) | OECD Guideline 202
| Fish toxicity<br>NOEC 48,897 mg/l | 30 d | Fish species | http://epa.gov/oppt/exposure/pubs/episul | other: QSAR
| Algae toxicity<br>NOEC 51 mg/l | 3 d | | |
| Crustacea toxicity<br>NOEC 51 mg/l | 21 d | Daphnia magna | Review article or handbook (2009) | OECD Guideline 211
| Acute bacteria toxicity<br>(1385 mg/l) | 3 h | Activated sludge, domestic | Study report (1989) | OECD Guideline 209

**3-aminomethyl-3,5,5-trimethylcyclohexylamine**<br>2855-13-2 | Acute fish toxicity<br>LC50 110 mg/l | 96 h | Leuciscus idus | Study report (1993) | EU Method C.1
| Acute algae toxicity<br>ErC50 37 mg/l | 72 h | Desmodesmus subspicatus | Study report (1993) | EU Method C.3
| Acute crustacea toxicity<br>EC50 23 mg/l | 48 h | Daphnia magna | Study report (2002) | OECD Guideline 202
| Crustacea toxicity<br>NOEC 3 mg/l | 21 d | Daphnia magna | Study report (1993) | other: OECD 202, part 2

**m-phenylenebis(methylene)amine**<br>1477-55-0 | Acute fish toxicity<br>LC50 > 100 mg/l | > 100 | 96 h | Oncorhynchus mykiss | REACh Registration Dossier | OECD Guideline 203
| Acute algae toxicity<br>ErC50 12 mg/l | 72 h | Desmodesmus subspicatus | REACh Registration Dossier | OECD Guideline 201
| Acute crustacea toxicity<br>EC50 15,2 mg/l | 48 h | Daphnia magna (Big water flea) | Study report (2004) | OECD Guideline 209
| Acute bacteria toxicity<br>(> 1000 mg/l) | 0,5 h | Activated sludge from laboratory wastewater plant | Study report (2004) | OECD Guideline 209

**3-aminopropytriethoxysilane**<br>919-30-2 | Acute fish toxicity<br>LC50 > 934 mg/l | 96 h | Danio rerio | Study report (1994) | OECD Guideline 203
| Acute algae toxicity<br>ErC50 > 1000 mg/l | 72 h | Desmodesmus subspicatus | Study report (1994) | EU Method C.3
| Acute crustacea toxicity<br>EC50 331 mg/l | 48 h | Daphnia magna | Study report (1993) | OECD Guideline 202
12.2. Persistence and degradability

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Chemical name</th>
<th>Method</th>
<th>Value</th>
<th>d</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>100-51-6</td>
<td>benzyl alcohol</td>
<td>OECD 301A/ ISO 7827/ EEC 92/69/V, C.4-A</td>
<td>95 - 97%</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Readily biodegradable (according to OECD criteria).</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Not readily biodegradable (according to OECD criteria)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1477-55-0</td>
<td>m-phenylenebis(methylamine)</td>
<td>OECD 301B/ ISO 9439/ EEC 92/69/V, C.4-C</td>
<td>49 %</td>
<td>28</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Not readily biodegradable (according to OECD criteria)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>919-30-2</td>
<td>3-aminopropyltriethoxysilane</td>
<td></td>
<td>68</td>
<td>28</td>
<td></td>
</tr>
</tbody>
</table>

12.3. Bioaccumulative potential

No information available.

Partition coefficient octanol/water

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Chemical name</th>
<th>Log Pow</th>
</tr>
</thead>
<tbody>
<tr>
<td>100-51-6</td>
<td>benzyl alcohol</td>
<td>1</td>
</tr>
<tr>
<td>2855-13-2</td>
<td>3-aminomethyl-3,5,5-trimethylcyclohexylamine</td>
<td>0,99</td>
</tr>
<tr>
<td>1477-55-0</td>
<td>m-phenylenebis(methylamine)</td>
<td>ca. 0,18</td>
</tr>
<tr>
<td>919-30-2</td>
<td>3-aminopropyltriethoxysilane</td>
<td>1,7</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 2735
14.2. UN proper shipping name: AMINES, LIQUID, CORROSIVE, N.O.S. (Isophorondiamine, m-phenylenebis(methylamine))
14.3. Transport hazard class(es): 8
14.4. Packing group: II
    Hazard label: 8
    Classification code: C7
    Special Provisions: 274
    Limited quantity: 1 L
    Excepted quantity: E2
    Transport category: 2
    Hazard No: 80
    Tunnel restriction code: E

Inland waterways transport (ADN)

14.1. UN number: UN 2735
14.2. UN proper shipping name: AMINES, LIQUID, CORROSIVE, N.O.S. (Isophorondiamine, m-phenylenebis(methylamine))
14.3. Transport hazard class(es): 8
14.4. Packing group: II
    Hazard label: 8
    Classification code: C7
    Special Provisions: 274
    Limited quantity: 1 L
    Excepted quantity: E2

Marine transport (IMDG)

14.1. UN number: UN 2735
14.2. UN proper shipping name: AMINES, LIQUID, CORROSIVE, N.O.S. (Isophorondiamine, m-phenylenebis(methylamine))
14.3. Transport hazard class(es): 8
14.4. Packing group: II
    Hazard label: 8
    Special Provisions: 274
    Limited quantity: 1 L
    Excepted quantity: E2
    EmS: F-A, S-B
Segregation group: alkalis

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number: UN 2735
14.2. UN proper shipping name: AMINES, LIQUID, CORROSIVE, N.O.S. (Isophorondiamine, m-phenylenebis(methylamine))
14.3. Transport hazard class(es): 8
14.4. Packing group: II
Hazard label: 8
Special Provisions: A3 A803
Limited quantity Passenger: 0.5 L
Passenger LQ: Y840
Excepted quantity: E2

14.5. Environmental hazards
ENVIRONMENTALLY HAZARDOUS: no

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
Restrictions on use (REACH, annex XVII):
Entry 3: 3-aminopropyltriethoxysilane
Information according to 2012/18/EU (SEVESO III):
Not subject to 2012/18/EU (SEVESO III)

National regulatory information
Water contaminating class (D): 2 - clearly water contaminating

15.2. Chemical safety assessment
For the following substances of this mixture a chemical safety assessment has been carried out:
- benzyl alcohol
- 3-aminomethyl-3,5,5-trimethylcyclohexylamine
- m-phenylenebis(methylamine)
- 3-aminopropyltriethoxysilane

SECTION 16: Other information
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)
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
BCF: Bio-concentration factor
PBT: persistent, bioaccumulative, toxic
vPvB: very persistent, very bioaccumulative
MARPOL: International Convention for the Prevention of Marine Pollution from Ships
IBC: Intermediate Bulk Container
SVHC: Substance of Very High Concern

Classification for mixtures and used evaluation method according to Regulation (EC) No. 1272/2008 [CLP]

<table>
<thead>
<tr>
<th>Classification</th>
<th>Classification procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Tox. 4; H302</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Acute Tox. 4; H332</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Skin Corr. 1; 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>Aquatic Chronic 3; H412</td>
<td>Calculation method</td>
</tr>
</tbody>
</table>

Relevant H and EUH statements (number and full text)

H302          Harmful if swallowed.
H302+H332     Harmful if swallowed or if inhaled.
H312          Harmful in contact with skin.
**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>H314</td>
<td>Causes severe skin burns and eye damage.</td>
</tr>
<tr>
<td>H317</td>
<td>May cause an allergic skin reaction.</td>
</tr>
<tr>
<td>H318</td>
<td>Causes serious eye damage.</td>
</tr>
<tr>
<td>H319</td>
<td>Causes serious eye irritation.</td>
</tr>
<tr>
<td>H332</td>
<td>Harmful if inhaled.</td>
</tr>
<tr>
<td>H411</td>
<td>Toxic to aquatic life with long lasting effects.</td>
</tr>
<tr>
<td>H412</td>
<td>Harmful to aquatic life with long lasting effects.</td>
</tr>
<tr>
<td>EUH071</td>
<td>Corrosive to the respiratory tract.</td>
</tr>
</tbody>
</table>

**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.)*