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

1.1. Product identifier
Ceramic-Polymer KTW-1 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 information available.

1.3. Details of the supplier of the safety data sheet
Company name: Ceramic Polymer GmbH
Street: Daimlerring 9
Place: DE-32289 Rödinghausen
Telephone: +49(0) 52 23 / 9 62 76-0
Telefax: +49(0) 52 23 / 9 62 76-17
e-mail: info@ceramic-polymer.de
Internet: www.ceramic-polymer.de
Responsible Department: +49(0) 1 92 40 (GIZ-Nord, 24h)

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
Skin corrosion/irritation: Skin Corr. 1A
Serious eye damage/eye irritation: Eye Dam. 1
Respiratory or skin sensitisation: Skin Sens. 1
Hazardous to the aquatic environment: Aquatic Acute 1
Hazardous to the aquatic environment: Aquatic Chronic 1
Hazard Statements:
Causes severe skin burns and eye damage.
May cause an allergic skin reaction.
Harmful if inhaled.
Very toxic to aquatic life with long lasting effects.

2.2. Label elements
Regulation (EC) No. 1272/2008
Hazard components for labelling
Fatty acids, C18 unsat, reaction products with diethylenetriamine
m-phenylenebis(methylamine)
Signal word: Danger

Pictograms:

Hazard statements
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H332 Harmful if inhaled.
Precautionary statements

**H410** Very toxic to aquatic life with long lasting effects.

- **P260** Do not breathe dust/fume/gas/mist/vapours/spray.
- **P309+P311** IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician.
- **P337+P313** If eye irritation persists: Get medical advice/attention.
- **P333+P313** If skin irritation or rash occurs: Get medical advice/attention.
- **P304+P340** IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- **P280** Wear protective gloves/protective clothing/eye protection/face protection.
- **P362+P364** Take off contaminated clothing and wash it before reuse.
- **P273** Avoid release to the environment.
- **P270** Do not eat, drink or smoke when using this product.
- **P403+P235** Store in a well-ventilated place. Keep cool.

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>
</tr>
</thead>
<tbody>
<tr>
<td>1226892-43-8</td>
<td>Fatty acids, C18 unsat, reaction products with diethylenetriamine</td>
<td>40-45 %</td>
<td>629-715-1</td>
<td>01-211947013-43</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Classification according to Regulation (EC) No. 1272/2008 [CLP]</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1477-55-0</td>
<td>m-phenylenebis(methylamine)</td>
<td>30-35 %</td>
<td>216-032-5</td>
<td>01-2119480150-50</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Classification according to Regulation (EC) No. 1272/2008 [CLP]</td>
<td></td>
<td></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
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.

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
  - High power 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.

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

6.2. Environmental precautions
- Do not allow to enter into surface water or drains. Cover drains.

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.
- Advice on protection against fire and explosion
  - See section 8. Wear personal protection equipment (refer to section 8). Keep container tightly closed.

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.
- Advice on storage compatibility
  - Keep away from:
    - Food and feedingstuffs
    - Oxidising agent
- Further information on storage conditions
  - Keep away from:
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>1226892-43-8</td>
<td>Fatty acids, C18 unsat, reaction products with diethylenetriamine</td>
<td>Worker DNEL, long-term</td>
<td>inhalation</td>
<td>systemic</td>
<td>1,7 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Worker DNEL, long-term</td>
<td>dermal</td>
<td>systemic</td>
<td>0,25 mg/kg bw/day</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Consumer DNEL, long-term</td>
<td>inhalation</td>
<td>systemic</td>
<td>0,6 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Consumer DNEL, long-term</td>
<td>dermal</td>
<td>systemic</td>
<td>0,18 mg/kg bw/day</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Consumer DNEL, long-term</td>
<td>oral</td>
<td>systemic</td>
<td>0,18 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>
</tbody>
</table>

PNEC values

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Substance</th>
<th>Environmental compartment</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1226892-43-8</td>
<td>Fatty acids, C18 unsat, reaction products with diethylenetriamine</td>
<td>Marine sediment</td>
<td>9,94 mg/kg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Secondary poisoning</td>
<td>2 mg/kg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Soil</td>
<td>9,44 mg/kg</td>
</tr>
<tr>
<td>1477-55-0</td>
<td>m-phenylenebis(methylamine)</td>
<td>Freshwater</td>
<td>0,094 mg/l</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Marine water</td>
<td>0,009 mg/l</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Freshwater sediment</td>
<td>0,43 mg/kg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Marine sediment</td>
<td>0,043 mg/kg</td>
</tr>
<tr>
<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>0,045 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
- Suitable gloves type:
  - NBR (Nitrile rubber) DIN EN 374,
  - Butyl caoutchouc (butyl rubber) DIN EN 374
- Wear cotton undermitten if possible.

### 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>Property</th>
<th>Value</th>
<th>Test method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>liquid</td>
<td></td>
</tr>
<tr>
<td>Colour</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Odour</td>
<td>characteristic</td>
<td></td>
</tr>
<tr>
<td>pH-Value</td>
<td>not determined</td>
<td></td>
</tr>
<tr>
<td>Changes in the physical state</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Melting point</td>
<td>not determined</td>
<td></td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>not determined</td>
<td></td>
</tr>
<tr>
<td>Sublimation point</td>
<td>not determined</td>
<td></td>
</tr>
<tr>
<td>Softening point</td>
<td>not determined</td>
<td></td>
</tr>
<tr>
<td>Pour point</td>
<td>not determined</td>
<td></td>
</tr>
<tr>
<td>Flash point</td>
<td>&gt;100 °C</td>
<td></td>
</tr>
<tr>
<td>Flammability</td>
<td></td>
<td>not determined</td>
</tr>
<tr>
<td>Solid</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gas</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Explosive properties</td>
<td></td>
<td>not determined</td>
</tr>
<tr>
<td>No information available.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower explosion limits</td>
<td>not determined</td>
<td></td>
</tr>
<tr>
<td>Upper explosion limits</td>
<td>not determined</td>
<td></td>
</tr>
<tr>
<td>Ignition temperature</td>
<td>not determined</td>
<td></td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td></td>
<td>not determined</td>
</tr>
<tr>
<td>Solid</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gas</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td></td>
<td>not determined</td>
</tr>
</tbody>
</table>
Oxidizing properties
No information available.

Vapour pressure: not determined
(at 25 °C)
Density (at 23 °C): not determined
Water solubility: not determined

Solubility in other solvents
No information available.
Partition coefficient: not determined
Viscosity / dynamic: not determined
Vapour density: not determined
Evaporation rate: not determined

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. No known hazardous decomposition products.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity
Harmful if inhaled.

ATEmix calculated
ATE (inhalative aerosol) 4,123 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>
</tr>
</thead>
<tbody>
<tr>
<td>1477-55-0</td>
<td>m-phenylenebis(methylamine)</td>
<td>oral</td>
<td>LD50</td>
<td>930 mg/kg</td>
<td>Rat</td>
</tr>
<tr>
<td></td>
<td></td>
<td>dermal</td>
<td>LD50</td>
<td>&gt;3100 mg/kg</td>
<td>Rabbit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>inhalative vapour</td>
<td>ATE</td>
<td>11 mg/l</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>inhalative (4 h) aerosol</td>
<td>LC50</td>
<td>1,34 mg/l</td>
<td>Rat</td>
</tr>
</tbody>
</table>

Irritation and corrosivity
Causes severe skin burns and eye damage.
**Sensitising effects**
May cause an allergic skin reaction. (Fatty acids, C18 unsat, reaction products with diethylenetriamine; 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

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Chemical name</th>
<th>Aquatic toxicity</th>
<th>Dose</th>
<th>[h]</th>
<th>[d]</th>
<th>Species</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>1477-55-0</td>
<td>m-phenylenebis(methylamine)</td>
<td>Acute fish toxicity</td>
<td>LC50</td>
<td>87.6 mg/l</td>
<td>96 h</td>
<td>Oryzias latipes (Ricefish)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Acute algae toxicity</td>
<td>EC50</td>
<td>20.3 mg/l</td>
<td>72 h</td>
<td>Selenastrum capricornutum</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Acute crustacea toxicity</td>
<td>EC50</td>
<td>15.2 mg/l</td>
<td>48 h</td>
<td>Daphnia magna (Big water flea)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Algae toxicity</td>
<td>NOEC</td>
<td>10.5 mg/l</td>
<td>3 d</td>
<td>Selenastrum capricornutum</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Crustacea toxicity</td>
<td>NOEC</td>
<td>4.7 mg/l</td>
<td>21 d</td>
<td>Daphnia magna (Big water flea)</td>
<td></td>
</tr>
</tbody>
</table>

#### 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>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>
</tbody>
</table>

#### 12.3. Bioaccumulative potential

**Partition coefficient n-octanol/water**

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Chemical name</th>
<th>Log Pow</th>
</tr>
</thead>
<tbody>
<tr>
<td>1477-55-0</td>
<td>m-phenylenebis(methylamine)</td>
<td>0.18</td>
</tr>
</tbody>
</table>

**BCF**

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Chemical name</th>
<th>BCF</th>
<th>Species</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>1477-55-0</td>
<td>m-phenylenebis(methylamine)</td>
<td>&lt;0.3</td>
<td></td>
<td></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

**Advice on disposal**
Dispose of waste according to applicable legislation.

**Contaminated packaging**
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. (Fatty acids, C18 unsat, reaction products with diethylenetriamine, 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
- **Transport category:** 2
- **Hazard No:** 80
- **Tunnel restriction code:** E

**Other applicable information (land transport)**

- E1
- E2

### Inland waterways transport (ADN)

- **14.1. UN number:** UN 2735
- **14.2. UN proper shipping name:** AMINES, LIQUID, CORROSIVE, N.O.S. (Fatty acids, C18 unsat, reaction products with diethylenetriamine, 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

**Other applicable information (inland waterways transport)**

- E1
- E2

### Marine transport (IMDG)

- **14.1. UN number:** UN 2735
- **14.2. UN proper shipping name:** AMINES, LIQUID, CORROSIVE, N.O.S. (Fatty acids, C18 unsat, reaction products with diethylenetriamine, m-phenylenebis(methylamine))
- **14.3. Transport hazard class(es):** 8
- **14.4. Packing group:** II
- **Hazard label:** 8
- **Marine pollutant:** p
- **Special Provisions:** 274
- **Limited quantity:** 1 L
- **EmS:** F-A, S-B
- **Segregation group:** 18 - alkalis
### Other applicable information (marine transport)
- E1
- E2

### Air transport (ICAO-TI/IATA-DGR)

14.1. **UN number:** UN 2735
14.2. **UN proper shipping name:** AMINES, LIQUID, CORROSIVE, N.O.S. (Fatty acids, C18 unsat, reaction products with diethylenetriamine, 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
   - **IATA-packing instructions - Passenger:** 851
   - **IATA-max. quantity - Passenger:** 1 L
   - **IATA-packing instructions - Cargo:** 855
   - **IATA-max. quantity - Cargo:** 30 L

### Other applicable information (air transport)
- E1
  - Passenger-LQ: Y964
- E2
  - Passenger-LQ: Y840

14.5. **Environmental hazards**
   - **ENVIRONMENTALLY HAZARDOUS:** yes
   - **Danger releasing substance:** Fatty acids, C18 unsat, reaction products with diethylenetriamine

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**
   - **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):** 2 - water contaminating

15.2. **Chemical safety assessment**
   - For the following substances of this mixture a chemical safety assessment has been carried out:
     - Fatty acids, C18 unsat, reaction products with diethylenetriamine
     - m-phenylenebis(methylamine)

### SECTION 16: Other information

- **Changes**
  - This data sheet contains changes from the previous version in section(s): 1.

- **Abbreviations and acronyms**
  - ADR: Accord européen sur le transport des marchandises dangereuses par Route
Safety Data Sheet

according to Regulation (EC) No 1907/2006

Ceramic-Polymer KTW-1 Part B

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Relevant H and EUH statements (number and full text)

H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H332 Harmful if inhaled.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.
EUH071 Corrosive to the respiratory tract.

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.)