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

1.1. Product identifier
Ceramic-Polymer KTW-1 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 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
Telex: +49(0) 52 23 / 9 62 76-17
E-mail: info@ceramic-polymer.de
Internet: www.ceramic-polymer.de

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 Irrit. 2
Serious eye damage/eye irritation: Eye Dam. 1
Respiratory or skin sensitisation: Skin Sens. 1
Hazardous to the aquatic environment: Aquatic Chronic 2

Hazard Statements:
Causes skin irritation.
May cause an allergic skin reaction.
Causes serious eye damage.
Toxic to aquatic life with long lasting effects.

2.2. Label elements

Regulation (EC) No. 1272/2008

Hazard components for labelling
4,4’-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane
1,4-bis(2,3 epoxypropoxy)butane
Signal word: Danger

Pictograms:

Hazard statements
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H411 Toxic to aquatic life with long lasting effects.
Safety Data Sheet

according to Regulation (EC) No 1907/2006

Precautionary statements

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.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P337+P313 If eye irritation persists: Get medical advice/attention.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P362+P364 Take off contaminated clothing and wash it before reuse.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
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.

Special labelling of certain mixtures
EUH205 Contains epoxy constituents. May produce an allergic reaction.

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>25068-38-6</td>
<td>4,4’-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane</td>
<td>50-55 %</td>
</tr>
<tr>
<td>500-033-5</td>
<td>1,4-bis(2,3 epoxypropoxy)butane</td>
<td>8-10 %</td>
</tr>
</tbody>
</table>

Classification according to Regulation (EC) No. 1272/2008 [CLP]

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
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.

Advice on storage compatibility
Keep away from:
Food and feedingstuffs
Oxidising agent

Further information on storage conditions
Keep away from:
### 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>25068-38-6</td>
<td>4,4’-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane</td>
<td>Worker DNEL, long-term</td>
<td>inhalation</td>
<td>systemic</td>
<td>12.25 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Worker DNEL, acute</td>
<td>inhalation</td>
<td>systemic</td>
<td>12.25 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Worker DNEL, long-term</td>
<td>dermal</td>
<td>systemic</td>
<td>8.33 mg/kg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Worker DNEL, acute</td>
<td>dermal</td>
<td>systemic</td>
<td>8.33 mg/kg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Consumer DNEL, long-term</td>
<td>dermal</td>
<td>systemic</td>
<td>3.571 mg/kg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Consumer DNEL, acute</td>
<td>dermal</td>
<td>systemic</td>
<td>3.571 mg/kg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Consumer DNEL, long-term</td>
<td>oral</td>
<td>systemic</td>
<td>0.75 mg/kg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Consumer DNEL, acute</td>
<td>oral</td>
<td>systemic</td>
<td>0.75 mg/kg</td>
</tr>
</tbody>
</table>

| 2425-79-8  | 1,4-bis(2,3 epoxypropoxy)butane                                               | Worker DNEL, long-term | inhalation     | systemic | 4.7 mg/m³   |
|            |                                                                           | Worker DNEL, long-term | dermal         | systemic | 6.66 mg/kg  |
|            |                                                                           | Consumer DNEL, long-term | inhalation   | systemic | 1.16 mg/m³  |
|            |                                                                           | Consumer DNEL, long-term | dermal       | systemic | 3.33 mg/kg  |
|            |                                                                           | Consumer DNEL, long-term | oral         | systemic | 0.33 mg/kg  |

#### PNEC values

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Substance</th>
<th>Environmental compartment</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>25068-38-6</td>
<td>4,4’-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane</td>
<td>Freshwater</td>
<td>0.006 mg/l</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Marine water</td>
<td>0.001 mg/l</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Freshwater sediment</td>
<td>0.996 mg/kg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Marine sediment</td>
<td>0.1 mg/kg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Secondary poisoning</td>
<td>11 mg/kg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Soil</td>
<td>0.196 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>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>liquid</td>
</tr>
<tr>
<td>Colour</td>
<td></td>
</tr>
<tr>
<td>Odour</td>
<td>characteristic</td>
</tr>
<tr>
<td>pH-Value</td>
<td>not determined</td>
</tr>
</tbody>
</table>

#### Changes in the physical state

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melting point</td>
<td>not determined</td>
</tr>
<tr>
<td>Initial boiling point</td>
<td>not determined</td>
</tr>
<tr>
<td>Sublimation point</td>
<td>not determined</td>
</tr>
<tr>
<td>Softening point</td>
<td>not determined</td>
</tr>
<tr>
<td>Pour point</td>
<td>not determined</td>
</tr>
<tr>
<td>Flash point</td>
<td>&gt; 100 °C</td>
</tr>
</tbody>
</table>

**Flammability**

- Solid: not determined
- Gas: not determined

**Explosive properties**

- No information available.
- Lower explosion limits: not determined
- Upper explosion limits: not determined
- Ignition temperature: not determined

**Auto-ignition temperature**

---
Safety Data Sheet

according to Regulation (EC) No 1907/2006

Ceramic-Polymer KTW-1 Part A

Solid: not determined
Gas: not determined

Decomposition temperature: not determined

Oxidizing properties
No information available.

Vapour pressure: not determined
Density: 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
Based on available data, the classification criteria are not met.

<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>2425-79-8</td>
<td>1,4-bis(2,3 epoxypropoxy)butane</td>
<td>oral</td>
<td>ATE</td>
<td>500 mg/kg</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>dermal</td>
<td>ATE</td>
<td>1100 mg/kg</td>
<td></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 aerosol</td>
<td>ATE</td>
<td>1,5 mg/l</td>
<td></td>
</tr>
</tbody>
</table>

Irritation and corrosivity
Causes skin irritation.
Causes serious eye damage.

**Sensitising effects**
May cause an allergic skin reaction. (4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane; 1,4-bis(2,3 epoxypropoxy)butane)

**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**
No information available.

12.2. **Persistence and degradability**
No information available.

12.3. **Bioaccumulative potential**
No information available.

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 3082

14.2. **UN proper shipping name:**
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (epoxy resin)

14.3. **Transport hazard class(es):**
9

14.4. **Packing group:**
III

**Hazard label:**
9

**Classification code:**
M6

**Special Provisions:**
274 335 601

**Limited quantity:**
5 L

**Transport category:**
3

**Hazard No:**
90
Inland waterways transport (ADN)

14.1. UN number: UN 3082
14.2. UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (epoxy resin)
14.3. Transport hazard class(es): 9
14.4. Packing group: III
Hazard label: 9
Classification code: M6
Special Provisions: 274 335 601
Limited quantity: 5 L
Other applicable information (inland waterways transport)

E1

Marine transport (IMDG)

14.1. UN number: UN 3082
14.2. UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (epoxy resin)
14.3. Transport hazard class(es): 9
14.4. Packing group: III
Hazard label: 9
Marine pollutant: p
Special Provisions: 274, 335
Limited quantity: 5 L
EmS: F-A, S-F
Other applicable information (marine transport)

E1

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number: UN 3082
14.2. UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (epoxy resin)
14.3. Transport hazard class(es): 9
14.4. Packing group: III
Hazard label: 9
Special Provisions: A97 A158
Limited quantity Passenger: 30 kg G
IATA-packing instructions - Passenger: 964
IATA-max. quantity - Passenger: 450 L
IATA-packing instructions - Cargo: 964
IATA-max. quantity - Cargo: 450 L
Other applicable information (air transport)

E1
Passenger-LQ: Y964

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

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:
4,4’-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane
1,4-bis(2,3 epoxypropoxy)butane

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 (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)
CAS: Chemical Abstracts Service (division of the American Chemical Society)
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
CLP: Regulation on Classification, Labelling and Packaging of Substances and Mixtures,
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
EC50: Effective concentration, 50 percent
DNEL: Derived No Effect Level
PNEC: Predicted No Effect Concentration
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative

Relevant H and EUH statements (number and full text)

H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H411 Toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.
EUH205 Contains epoxy constituents. May produce an allergic reaction.

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.)