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

- **1.1 Product identifier**
  - Trade name: CERETAN® E 21

- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
  - No further relevant information available.

- **1.3 Details of the supplier of the safety data sheet**
  - **Manufacturer/Supplier:**
    - MUNZING Micro Technologies GmbH
    - Dr.-Bergius-Straße 16-24
    - 06729 Elberfeld, Germany
    - E-Mail: ceretan@munzing.com
    - Tel.: +49 3441 829 10-22

- **Further information obtainable from:**
  - Product Safety Department
  - E-mail (MSDS): msvs@munzing.com

- **1.4 Emergency telephone number:** For Chemical Emergencies: CHEMTREC: +1 703 741 5970

**SECTION 2: Hazards identification**

- **2.1 Classification of the substance or mixture**
  - Classification according to Regulation (EC) No 1272/2008
  - The product is not classified, according to the CLP regulation.

- **2.2 Label elements**
  - Labelling according to Regulation (EC) No 1272/2008 Void
  - Hazard pictograms Void
  - Signal word Void
  - Hazard statements Void
  - 2.3 Other hazards Risk of dust explosion
  - Results of PBT and vPvB assessment Not applicable.
  - PBT: None.
  - vPvB: None.

**SECTION 3: Composition/information on ingredients**

- **3.2 Chemical characterisation:** Mixtures
- **Description:** Micronized polyethylene waxes
- **Dangerous components:** Void

**SECTION 4: First aid measures**

- **4.1 Description of first aid measures**
  - General information: No special measures required.
  - After inhalation: Supply fresh air; consult doctor in case of complaints.
  - After skin contact: Immediately wash with water and soap and rinse thoroughly.
  - After eye contact: Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
  - After swallowing: If symptoms persist consult doctor.

- **4.2 Most important symptoms and effects, both acute and delayed**
  - No further relevant information available.

(Contd. on page 2)
**SECTION 5: Firefighting measures**

- **5.1 Extinguishing media**
  - Suitable extinguishing agents: CO2, powder or water spray. Fight larger fire with alcohol resistant foam.
- **5.2 Special hazards arising from the substance or mixture**
  - Formation of toxic gases is possible during heating or in case of fire.
  - In case of fire, the following can be released:
    - Carbon monoxide (CO)
    - Nitrogen oxides (NOx)
- **5.3 Advice for firefighters**
  - Protective equipment: Do not inhale explosion gases or combustion gases.
- **Additional information**
  - Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

**SECTION 6: Accidental release measures**

- **6.1 Personal precautions, protective equipment and emergency procedures**
  - Avoid formation of dust.
  - Use respiratory protective device against the effects of fumes/dust/aerosol.
  - Particular danger of slipping on leaked/spilled product.
- **6.2 Environmental precautions**
  - No special measures required.
- **6.3 Methods and material for containment and cleaning up**
  - Pick up mechanically.
- **6.4 Reference to other sections**
  - No dangerous substances are released.
  - See Section 7 for information on safe handling.
  - See Section 8 for information on personal protection equipment.
  - See Section 13 for disposal information.

**SECTION 7: Handling and storage**

- **7.1 Precautions for safe handling**
  - Keep away from heat and direct sunlight.
  - Prevent formation of dust.
  - Ensure good ventilation/exhaustion at the workplace.
  - Information about fire - and explosion protection:
    - Protect against electrostatic charges.
    - Dust can combine with air to form an explosive mixture.
    - Keep ignition sources away - Do not smoke.
- **7.2 Conditions for safe storage, including any incompatibilities**
  - Storage:
    - Requirements to be met by storerooms and receptacles: Store in a cool location.
    - Information about storage in one common storage facility: Store away from oxidising agents.
    - Further information about storage conditions: Store in cool, dry conditions in well sealed receptacles.
- **7.3 Specific end use(s)**
  - No further relevant information available.
SECTION 8: Exposure controls/personal protection

- Additional information about design of technical facilities: No further data; see item 7.
- 8.1 Control parameters
  - Ingredients with limit values that require monitoring at the workplace:
    The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
  - Additional information: The lists valid during the making were used as basis.
- 8.2 Exposure controls
  - Personal protective equipment:
    - General protective and hygienic measures:
      Avoid contact with the eyes and skin.
      The usual precautionary measures are to be adhered to when handling chemicals.
      Do not inhale dust / smoke / mist.
    - Respiratory protection:
      In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
  - Protection of hands:
    Only use chemical-protective gloves with CE-labelling of category III.
    The glove material has to be impermeable and resistant to the product / the substance / the preparation.
  - Material of gloves
    Nitrile rubber, NBR
    Recommended thickness of the material: ≥ 0.4 mm
    The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
  - Penetration time of glove material
    The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
  - Eye protection: Safety glasses
  - Body protection: Protective work clothing

SECTION 9: Physical and chemical properties

- 9.1 Information on basic physical and chemical properties
  - General Information
    - Appearance:
      Form: Powder
      Colour: White
    - Odour:
      Specific type
    - Odour threshold:
      Not determined.
  - pH-value:
    Not applicable.
  - Change in condition
    Melting point/freezing point: > 100 °C
    Initial boiling point and boiling range: Undetermined.
    Drip point: ≈ 110 °C (DGF M-III 3)
  - Flash point:
    > 100 °C
  - Flammability (solid, gas):
    Product is not flammable.
Trade name: CERETAN® E 21

(Contd. of page 3)

· Ignition temperature: Not determined.
· Decomposition temperature: Not determined.
· Auto-ignition temperature: Product is not selfigniting.
· Explosive properties: Product is not explosive. However, formation of explosive dust/vapour mixtures are possible.

· Explosion limits: Not determined.
  Lower: Not determined.
  Upper: Not determined.
· Oxidising properties: None.
· Vapour pressure: Not applicable.
· Density at 23 °C: ≈ 0.93 g/cm³ (DIN EN ISO 1183)
  Relative density: < 1.0 g/cm³
· Vapour density: Not applicable.
· Evaporation rate: Not applicable.
· Solubility in / Miscibility with water: Insoluble.
· Partition coefficient: n-octanol/water: Not determined.
· Viscosity: Dynamic at 140 °C: ≈ 150 mPas (DIN EN ISO 3104)
· Solvent content:
  - Solids content: ≈ 100 %
  - 9.2 Other information: No further relevant information available.

SECTION 10: Stability and reactivity

· 10.1 Reactivity: No further relevant information available.
· 10.2 Chemical stability
· Thermal decomposition / conditions to be avoided:
  No decomposition if used and stored according to specifications.
· 10.3 Possibility of hazardous reactions: Risk of dust explosion.
· 10.4 Conditions to avoid: No further relevant information available.
· 10.5 Incompatible materials: No further relevant information available.
· 10.6 Hazardous decomposition products: No dangerous decomposition products known.

SECTION 11: Toxicological information

· 11.1 Information on toxicological effects
· Acute toxicity: Based on available data, the classification criteria are not met.
· LD/LC50 values relevant for classification:
  Oral LD50: >5,000 mg/kg (rat)
· Primary irritant effect:
· Skin corrosion/irritation: Based on available data, the classification criteria are not met.
· Serious eye damage/irritation: Based on available data, the classification criteria are not met.
· Respiratory or skin sensitisation: Based on available data, the classification criteria are not met.

(Contd. on page 5)
Disposal must be made according to official regulations.

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

Recommendation

Recommended cleansing agents:

14.3 Transport hazard class(es)

ADR/RID/ADN, ADN, IMDG, IATA

Class

Void
Trade name: CERETAN® E 21

(Contd. of page 5)

<table>
<thead>
<tr>
<th>14.4 Packing group</th>
<th>Void</th>
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<tbody>
<tr>
<td>ADR/RID/ADN, IMDG, IATA</td>
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<tr>
<td>14.5 Environmental hazards:</td>
<td>No</td>
</tr>
<tr>
<td>Marine pollutant:</td>
<td>Not applicable.</td>
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<tr>
<td>14.6 Special precautions for user</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Transport/Additional information:</td>
<td>Not a dangerous good to the above specifications.</td>
</tr>
<tr>
<td>UN &quot;Model Regulation&quot;:</td>
<td>Void</td>
</tr>
</tbody>
</table>

SECTION 15: Regulatory Information

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

- Directive 2012/18/EU
- Named dangerous substances - ANNEX I None of the ingredients is listed.
- National regulations:
- Water hazard class: Not hazardous for water.

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- Department issuing SDS:
  Product Safety Department
  E-Mail: msds@munzing.com

- Abbreviations and acronyms:
  ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
  IMDG: International Maritime Code for Dangerous Goods
  IATA: International Air Transport Association
  GHS: Globally Harmonised System of Classification and Labelling of Chemicals
  EINECS: European Inventory of Existing Commercial Chemical Substances
  ELINCS: European List of Notified Chemical Substances
  CAS: Chemical Abstracts Service (division of the American Chemical Society)
  LC50: Lethal concentration, 50 percent
  LD50: Lethal dose, 50 percent
  PBT: Persistent, Bioaccumulative and Toxic
  vPvB: very Persistent and very Bioaccumulative