1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

1.1. Identification of the substance or preparation: SINTERED Yttrium-stabilised zirconium dioxide ceramics

1.2. Use of the substance/preparation: component of electrical and medical equipments

1.3. Company/undertaking identification

Manufacturer/distributor: Bakony Ipari Kerámia Kft.
Address: H-8202 Veszprém, Csererdő Pf. 2078
Phone: +36-(88) 590-047
Fax: +36-(88) 421-715
Email: info@bakonycer.hu

1.4. Emergency telephone

Austria +43 1 40 400 2222
Belgium +32 70 245 245
Bulgaria +359 2 9154 409
Czech Republic +42 2 2491 9293 or +42 2 2491 5402
Denmark +45 3531 3531
Finland +358 9 471 977
France +33 1 40 05 48 48
Germany +49 30 19240
Greece +30 10 779 3777
Hungary +36 12 15 37 33, +36 80 20 11 99
Iceland +354 525 111, +354 543 2222
Ireland +353 1 8379964
Italy +39 06 305 4343
Latvia +371 704 2468
Lithuania +370 2 36 20 52, +370 2 36 20 92
Netherlands +31 30 274 88 88
Poland +48 22 619 66 54
Portugal +351 21 330 3284
Romania +40 2121 06282 or +40 2121 06183
Serbia +381 (0)11 36 72 187 or +381 (0)11 36 72 579
Slovakia +421 2 54 77 4 166
Slovenia +386 1 522 8619 or +386 1 522 2348
Spain +34 91 562 04 20
Sweden +46 8 33 12 31
United Kingdom +44 870 600 6266

2. HAZARDS IDENTIFICATION

2.1. Identification of danger:
This product is non-dangerous in accordance with Directive 1999/45/EC.

2.2. Human health effects and symptoms
No hazardous effects are known and it is not expected to have any at normal use conditions. The hazardous components are incorporated into the ceramics.

Modified sections: all
2.3. **Environmental health effects and symptoms:** No effects

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

The preparation contains no substances presenting a health or environmental hazard according to Directive 67/548/EEC, and substances for which Community workplace exposure limits are established.

Chemical composition:

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS No.</th>
<th>EC No.</th>
<th>Concentration (weight %)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zirconium oxide</td>
<td>1314-23-4</td>
<td>215-227-2</td>
<td>94 - 95</td>
</tr>
<tr>
<td>Yttrium oxide</td>
<td>1314-36-9</td>
<td>215-233-5</td>
<td>5 - 6</td>
</tr>
</tbody>
</table>

### 4. FIRST AID MEASURES

4.1. **Immediate medical attention:** not required.

4.2. **Inhalation:**

   No action is required.

4.3. **Ingestion:**

   No action is required.

4.4. **Skin:**

   No action is required.

4.5. **Eyes:**

   No action is required.

4.6. **Delayed effects:**

   Not expected.

4.7. **Special means at the workplace:** not required

### 5. FIRE-FIGHTING MEASURES

5.1. **Suitable extinguishing media:** not combustible. In case of fire in the surroundings use appropriate extinguishing media.

5.2. **Extinguishing media which shall not be used for safety reasons:** none

5.3. **Special exposure hazards arising from the substance or preparation itself, combustion products, resulting gases:** none

5.4. **Special protective equipment for fire-fighters:**

   Depends on fire in the surroundings.
6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions:
Prevent dusting.

6.2. Environmental precautions:
Keep away from drains, surface- and ground-water and soil.

6.3. Methods for cleaning up:
The spilled material must be swept, collected in labeled containers and treated as a hazardous waste. (see section 13) Ventilate area and flush spill site after material pickup is complete.

7. HANDLING AND STORAGE

7.1. Handling
No special measures are needed.

7.2. Storage
No special conditions are needed. Ship in paper or plastic wrapper.

7.3. Specific use(s): none

8. EXPOSURE CONTROLS/PERSONAL PROTECTION


8.1. Exposure limit values

8.1.1. Occupational exposure limit values

<table>
<thead>
<tr>
<th>Component</th>
<th>TWA mg/m³</th>
<th>STEL mg/m³</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zirconium oxide</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAS # 1314-23-4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lithuania</td>
<td>6</td>
<td>-</td>
</tr>
<tr>
<td>Yttrium oxide</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAS # 1314-36-9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lithuania</td>
<td>2</td>
<td>-</td>
</tr>
</tbody>
</table>

8.1.2. Biological limit values
8.1.2.1. Urine: no limit values
8.1.2.2. Blood: no limit values

8.2. Exposure controls
8.2.1. Occupational exposure controls:
8.2.1.1. Respiratory protection:
Not required.
8.2.1.2. Hand protection:
Not required.
8.2.1.3. Eye protection:
Not required.
8.2.1.4. Skin protection:
Not required.

8.2.2. Environmental exposure controls:
Keep away from drains, surface- and ground-water and soil.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. General information
Appearance: solid
Color: white
Odour: odourless

9.2. Important health, safety and environmental information:
pH (20°C): Not specific
Boiling point/boiling range: Not specific
Flash point: Not combustible
Explosive properties: Not specific
Oxidising properties: Not specific
Relative density: 5.80 – 6.10 g/cm³
Solubility
Water solubility: insoluble
Partition coefficient: n-octanol/water: Not specific
Viscosity: Not specific

9.3. Other information:
Miscibility: Not miscible with water
Fat solubility: Not soluble
Melting point/melting range: ~2715°C

10. STABILITY AND REACTIVITY

10.1. Conditions to avoid:
None.

10.2. Materials to avoid:
None

10.3. Hazardous decomposition products:
None

11. TOXICOLOGICAL INFORMATION

11.1. Acute exposition effects
Inhalation: No effects
Ingestion: No effects
Skin: No effects
Eye: No effects

11.2. Chronic exposition effects:
Inhalation: No effects
Ingestion: No effects
Skin: No effects
Eye: No effects
12. ECOLOGICAL INFORMATION

12.1. Ecotoxicity:
No ecological effect is known for normal uses.

12.2. Mobility:
Components are not water soluble; no mobility is expected.

12.3. Persistence and degradability:
All components are mineral salts, therefore degradability is not interpretable.

12.4. Bioaccumulative potential: no bioaccumulation expected.

12.5. Other adverse effects:
Keep away from drains, surface- and ground-water and soil!

13. DISPOSAL CONSIDERATIONS

13.1. General considerations:
In accordance with local and national regulations

According to the European Waste Catalog, Waste Codes are not product specific, but application specific. The following Waste Codes are only suggestions.

13.2. Waste from residues /unused products: use waste code 10 12 01 or 10 12 03. Dispose of by landfill.

13.3. Contaminated packaging: use waste code 15 01 02 or 15 01 04. Dispose of by recycling.

14. TRANSPORT INFORMATION

UN number: None
Shipping name: Not regulated.

14.1. ADR/RID
Class: Not regulated

14.2. IMDG/IMO
Class or Div: Not regulated

14.3. IATA/ICAO
Class or Div: Not regulated

15. REGULATORY INFORMATION

15.1. Classification in accordance with Directive 1999/45/EC:
Indication of danger: —
R-phrases: —
S-phrases: —
SAFETY DATA SHEET

SINTERED Yttrium-stabilised zirconium dioxide ceramics

in accordance with EC Regulation 1907/2006/EC

Date of issue: 13/02/2009
Revision date: 12/11/2010

Page: 6/6
Version 2

15.2. Main EU regulations:


16. OTHER INFORMATION

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Bakony Ipari Kerámia Kft. shall not be held liable for any damage resulting from handling or from contact with the above product. License granted to make unlimited paper copies for internal use only.

END OF SDS