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

1.1. Identification of the substance or preparation: Sintered aluminium oxide ceramics PINK

1.2. Use of the substance/preparation: insulating tubes, spark plugs, grinding balls, mill lining bricks, ceramic beads in welding and heat treatment

1.3. Company/undertaking identification

Manufacturer/distributor: Bakony Ipari Kerámiak Kft.
Address: H-8202 Vesprém, Csererdő
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 granulates.

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Inhalation: No effects
Ingestion: No effects
Skin contact: No effects
Eye contact: No effects

2.3. Environmental health effects and symptoms: No effects

3. COMPOSITION/INFORMATION ON INGREDIENTS

The preparation contains the following substances presenting a health or environmental hazard according to Directive 67/548/EEC, and substances for which Community workplace exposure limits are established:

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Concentration (weight %)</th>
<th>Hazard symbol(s)</th>
<th>R phrases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminium oxide</td>
<td>&gt; 95</td>
<td>Xi</td>
<td>R37</td>
</tr>
<tr>
<td>Calcium carbonate</td>
<td>&lt; 2</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Talc (Mg₃H₂(SiO₃)₄) (containing no asbestos fibres)</td>
<td>&lt; 2</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Ammonia, aqueous solution</td>
<td>&lt; 0.02</td>
<td>C</td>
<td>R34</td>
</tr>
<tr>
<td>Chromium(III)oxide</td>
<td>0.04</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

The meanings of R phrases are explained in section 16.

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. If symptoms persist consult a physician.

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4.4. **Skin:**
No action is required.

4.5. **Eyes:**
Immediately flush eyes with copious amounts of water for a few minutes while holding eyelids open. If symptoms persist consult a physician.

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:** ammonia, nitrous oxides, carbon monoxide, carbon dioxide

5.4. **Special protective equipment for fire-fighters:**
Use self-contained breathing apparatus approved under EN 14593-1 standard.

6. **ACCIDENTAL RELEASE MEASURES**

6.1. **Personal precautions:**
Provide sufficient ventilation/local exhaust.

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**
Provide sufficient ventilation/local exhaust. Do not eat, drink or smoke during work. Wash hands before eating.

7.2. **Storage**
Keep in a closed container in a dry, cool place.
Storage temperature > 5 °C

7.3. **Specific use(s):** none

8. **EXPOSURE CONTROLS/PERSONAL PROTECTION**


Modified sections: all
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><strong>Aluminium oxide</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAS # 117-81-7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Austria</td>
<td>6</td>
<td>30</td>
</tr>
<tr>
<td>Belgium</td>
<td>10</td>
<td>-</td>
</tr>
<tr>
<td>Denmark</td>
<td>10</td>
<td>-</td>
</tr>
<tr>
<td>Estonia</td>
<td>4</td>
<td>-</td>
</tr>
<tr>
<td>France</td>
<td>10</td>
<td>-</td>
</tr>
<tr>
<td>Germany</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Hungary</td>
<td>6</td>
<td>-</td>
</tr>
<tr>
<td>Lithuania</td>
<td>2</td>
<td>-</td>
</tr>
<tr>
<td>Norway</td>
<td>10</td>
<td>-</td>
</tr>
<tr>
<td>Poland</td>
<td>2</td>
<td>16</td>
</tr>
<tr>
<td>Romania</td>
<td>2</td>
<td>5</td>
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<tr>
<td>Spain</td>
<td>10</td>
<td>-</td>
</tr>
<tr>
<td>Switzerland</td>
<td>3</td>
<td>-</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>4</td>
<td>-</td>
</tr>
</tbody>
</table>

| **Calcium carbonate** |           |            |
| CAS # 1317-65-3 |           |            |
| Belgium    | 10        | -          |
| Bulgaria   | 10        | -          |
| Estonia    | 10        | -          |
| Hungary    | 10        | -          |
| Netherlands| 4         | -          |
| Switzerland| 3         | -          |
| United Kingdom | 4 | -        |

| Talc (Mg₃H₂(SiO₃)₄), containing no asbestos fibres |           |            |
| CAS # 14807-96-6 |           |            |
| Austria    | 2         | -          |
| Belgium    | 2         | -          |
| Norway     | 0.25      | -          |
| Slovenia   | 2         | -          |
| Sweden     | 2         | -          |
| Spain      | 2         | -          |
| Switzerland| 2         | -          |
| United Kingdom | 1 | -        |

| **Ammonia (aqueous solution)*** |           |            |
| CAS # 1336-21-6 |           |            |
| Austria    | 14        | 36         |
| Belgium    | 20        | 36         |
| Bulgaria   | 14        | 36         |
| Denmark    | 14        | -          |
| Estonia    | 14        | 36         |
| Finland    | 14        | 36         |
Chromium(III)oxide
CAS#1308-38-9
Estonia  0,02  0,06

*exposure limits refer to anhydrous ammonia

8.1.2.  **Biological limit values**

8.1.2.1.  **Urine:** no limit value
8.1.2.2.  **Blood:** no limit value

8.2.  **Exposure controls**

8.2.1.  **Occupational exposure controls:** provide adequate ventilation!

8.2.1.1.  **Respiratory protection:**
Avoid dust inhalation. Provide adequate ventilation. If these are not possible use a P1 type half-face respirator approved under standard EN 143.
*During processing avoid inhalation of vapours/gases. Use a half-face respirator approved under standard EN 140 with combined filter ABEK+P3 approved under standard EN 14357.

8.2.1.2.  **Hand protection:**
Avoid contact with skin. Use protective gloves approved under standard EN 420.

8.2.1.3.  **Eye protection:**
Use protective glasses Class 3. approved under standard EN 166.

8.2.1.4.  **Skin protection:**
No special protective equipment is required. The working suit confers adequate protection.

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:** acc. to specification
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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: 3.65 – 3.90 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: > 1600°C

10. STABILITY AND REACTIVITY

10.1. Conditions to avoid:
None.

10.2. Materials to avoid:
None

10.3. Hazardous decomposition products:
At thermal decomposition ammonia, nitrous oxides, carbon monoxide, carbon dioxide may be formed.

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: slight irritation

12. ECOLOGICAL INFORMATION

12.1. Ecotoxicity:
No ecological effect is known for normal uses.
Acute toxicity
- Aluminium oxide
  - LC₅₀ (fish)/96 h > 100 mg/l; Salmo trutta

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Talc
- $\text{LC}_{50} (\text{fish})/24 \text{ h} > 100 \text{ mg/l}; \text{Brachydanio rerio}$
- Ammonia (anhydrous):
  - $\text{LC}_{50} (\text{fish})/96 \text{ h}: 0.75 - 3.4 \text{ mg/l}; \text{Pimephales promelas}$
  - $\text{EC}_{50} (\text{crustaceans})/48 \text{ h}: 25.4 \text{ mg/l}; \text{Daphnia magna}$

12.2. **Mobility:**
Main components are not water soluble; however, ammonia may leak into the groundwater.

12.3. **Persistence and degradability:**
- ammonia (anhydrous)
  - half time (air): 100.3 day
  - readily biodegradable

The other components of granulates 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. Render harmless by recycling.

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:** —
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S20 When using do not eat or drink.
S22 Do not breathe dust.

15.2. Main EU regulations:


16. OTHER INFORMATION

Text of R phrases mentioned in Section 3.:

R34 Causes burns.
R37 Irritating to respiratory system.
R50 Very toxic to aquatic organisms.

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

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