Section 1. Identification of the product and of the company/undertaking

1.1. Product identifier
- Commercial name: Zirblast®
- Description: Electrofused ceramic beads
- REACH registration numbers: Exempted from registration under REACH regulation EC N°1907/2006

1.2. Relevant identified uses of the substance or mixture and uses advised against
- Identified uses: Media for surface treatment by impact.

1.3. Details of the supplier of the safety data sheet
- Company/undertaking: Saint-Gobain Ceramic Materials
- Address: 681 Curtin Avenue, Pinkenba QLD 4008, Australia
- Tel.: + 61 (0)7 3260 1860
- Fax: + 61 (0)7 3260 1782
- E-mail: zirpro@saint-gobain.com

1.4. Emergency telephone number
- Emergency tel.: + 61 (0)7 3260 1860 (Saint-Gobain Ceramic Materials)
- + 61 (0) 131 126 (Poisons information centre)

Section 2. Hazards identification

2.1. Classification of the substance or mixture
- CLP regulation EC 1272/2008: Ceramic beads are not classified as a hazardous product
- OSHA GHS (US): Ceramic beads are not classified as a hazardous product

2.2. Label elements
- Not required under CLP Regulation EC 1272/2008 and OSHA GHS (US).

2.3. Other Hazard
- Adverse effects on health: Possible irritation through abrasive friction. Moreover, surface treatments by impact might generate dust.
- NFPA Hazard Rating:
  - Reactivity: 0
  - Flammability: 0
  - Health: 0
- WHMIS: Not hazardous

Section 3. Composition/information on ingredients

<table>
<thead>
<tr>
<th>CAS Number</th>
<th>EINECS Number</th>
<th>Component</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1314-23-4</td>
<td>215-227-2</td>
<td>Zirconium Dioxide (ZrO₂)</td>
<td>60 to 70 %</td>
</tr>
<tr>
<td>60676-86-0</td>
<td>262-373-8</td>
<td>Silica glass (SiO₂)</td>
<td>28 to 33 %</td>
</tr>
<tr>
<td>1344-28-1</td>
<td>215-691-6</td>
<td>Alumina (Al₂O₃)</td>
<td>&lt;10 %</td>
</tr>
</tbody>
</table>
Additional information
- The ingredients of the silica-alumina vitreous phase cannot be dissociated by the product application in surface treatment by impact and it is free from crystalline silica.
- Traces of radioactive elements of natural origin (Series U238 and Th232, U+Th < 0.05%)
- Traces of fibrous particles (in the range of ppm) with same chemical composition as the beads (from production processing).

Section 4. First aid measures

4.1. Description of first aid measures

Eye contact: Rinse thoroughly. If irritation persists, consult an ophthalmologist.
Ingestion: N/A
Skin contact: N/A
Inhalation: N/A

4.2. Most important symptoms and effects, both acute and delayed
No data available

4.3. Indication of any immediate medical attention and special treatment needed
Treat symptomatically.

Section 5. Fire fighting measures

5.1. Extinguishing media
Suitable extinguishing media: All extinguishing agents can be used.

5.2. Special hazards arising from the substance or mixture
This product is not combustible or explosive. Does not present any particular risk in the event of fire.

5.3. Advice for firefighters
Specific fire fighting methods: Does not require any particular methods
Protection of fire-fighters: Use appropriate protective equipment.

Section 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Avoid contact with the eyes.

6.2. Environmental precautions
Do not discharge into drains and rivers.

6.3. Methods and material for containment and cleaning up
Vacuum up the product. Risk of slipping when present on the ground.

6.4. Reference to other sections
See section 8 for personal protective equipment. See section 13 for disposal considerations.
Section 7. Handling and storage

7.1. Precautions for safe handling
Technical measures  Ensure that areas are well ventilated.
Precautions to be taken For operations generating dust: Wear P3 dust mask (or N95 for US).
Wear safety goggles.

7.2. Conditions for safe storage, including any incompatibilities
Technical measures  Does not require any specific or particular technical measures.
Recommended storage conditions Dense material: Observe safety rules when stacking.

7.3. Specific end use(s)  See section 1.2

Section 8. Exposure control / personal protection

8.1. Control parameters
Engineering measures  Use in an enclosed cabinet or containment with an equipment able to capture the dust.

Control parameters  No applicable specific control parameters.

Occupational exposure limit values and/or biological limit values  No official limit values.

8.2. Exposure controls
Personal protective equipment
Respiratory protection  Wear a P3 dust mask (or N95 for US) during any operation which might generate dust.
Hand protection  Wear safety gloves.
Eye protection  Wear safety goggles.
Skin and body protection  Safety shoes.

Hygiene measures  Do not drink, eat or smoke during use.

Section 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical State  Beads
Color  White
Odor  Odorless
Median diameter  < 1.2 mm
Specific temperatures  Melting point: between 1850°C and 2550°C
Flammability characteristics  Flash point: not applicable
Bulk density  2.3 kg/dm³
Mass density  3.8 kg/dm³
Solubility  Insoluble
### 9.2. Other information
None

### Section 10. Stability and reactivity

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.1. Reactivity</td>
<td>No reactivity under normal conditions of use.</td>
</tr>
<tr>
<td>10.2. Chemical stability</td>
<td>Stable under normal conditions of use and below 1300°C</td>
</tr>
<tr>
<td>10.3. Possibility of hazardous reactions</td>
<td>No data available</td>
</tr>
<tr>
<td>10.4. Conditions to avoid</td>
<td>No dangerous reactions known under normal conditions of use.</td>
</tr>
<tr>
<td>10.5. Incompatible materials</td>
<td>Reacts with strong acids and bases.</td>
</tr>
<tr>
<td>10.6. Hazardous decomposition products</td>
<td>No data available</td>
</tr>
</tbody>
</table>

### Section 11. Toxicological information

11.1. Information on toxicological effects

| Toxicity | No specific data available. |
| Local effects | The dust can cause mechanical irritation of the eyes and the respiratory tract. |

### Section 12. Ecological information

12.1. Toxicity

| Ecotoxicity | No data available. |
| Effects on aquatic organisms | No data available. |

| 12.2. Persistence and degradability | No data available |
| 12.3. Bioaccumulative potential | No data available |
| 12.4. Mobility in soil | No data available |
| 12.5. Results of PBT and vPvB assessment | Not relevant because the substance is not classified. |
| 12.6. Other adverse effects | No data available |

### Section 13. Disposal considerations

13.1. Waste treatment methods

| Waste from product | The waste materials from surface treatment process must undergo a physico-chemical analysis in order to define their mode of disposal. |
| Possibility to collect the used ceramic beads for recycling upon request (product stewardship). |
| Contaminated packaging | To be disposed of at an authorised site. |
Section 14. Transport information

International regulations
RID/ADR/IMDG/IATA
Not restricted.

Section 15. Regulatory information

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

CLP regulation EC 1272/2008:
The ceramic beads are not classified as a dangerous product
All ingredients are listed on TSCA (Toxic Substance Control Act).
None of the constituent substances are listed in Proposition 65 (California).

15.2. Chemical safety assessment
A chemical safety assessment has not been carried out.

Section 16. Other information

Restrictions of use
This product must not be used for applications other than those indicated in § 1.

Voluntary labelling
Pictogram displayed on all the packaging.

Replaces sheet
30/08/2013

Information concerning the amendments:
- addition of subtitles in each section of the SDS
- addition of dust mask N95 for US standard
- mention of US GHS in sections 2 and 15
- modification of CAS number and EC number of silica glass in order to better fit to the definition of the product

This sheet is in addition to the technical sheets but it does not replace them. The information is given in good faith based on our current knowledge of this product, at the time of publication.
The attention of the user is drawn to the risks possibly incurred by using the product for any other purpose than that for which it was intended.
This does not in any way exempt the user from knowing and applying all the regulations governing his use of the product.
It is the sole responsibility of the user to take all precautions required in handling the product.
The mandatory regulations mentioned are only intended to help the user to fulfil his obligations regarding the use of hazardous products.
This listing must not be considered exhaustive. It does not exonerate the user from ensuring that other legal obligations than those mentioned do not exist, relating to the use and storage of the product for which he solely is responsible.