1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY

1.1 Identification of the substance/mixture

Product number: 3210095
Product name: BERELOC-50 Z
Description: Self-flowing low cement refractory castable, based on alumina and zircona. It features an excellent resistance to chemical attack by acid slags. It does not require vibration to be installed.

1.2 Relevant identified uses of the substance/mixture and uses advised against

Lining of foundry ladles. Safety linings of steelwork tundishes. Manufacturing of precast shapes. I can also be used in other industries, where such a castable is required.

1.3 Supplier identification

Manufacturer: REFRACTORY SOLUTIONS INSERTEC, S.L.U.
Address: Barrio Aperribai, 10 - Galdakao - 48960 Bizkaia - Spain
Phone No.: +34 944 409 450
Fax No.: +34 944 407 201
e-mail: insertec@insertec.biz

1.4 Emergency telephone number

Emergency telephone number: +34 944 409 450

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance/mixture

Classification EU (67/548/EC): Not classified
Regulation EC 1272/2008: Not classified

2.2 Label elements (GHS, Global Harmonized System)

Not necessary.

2.3 Other hazards

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS No.</th>
<th>%-%w</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminium oxide</td>
<td>1344-28-1</td>
<td>5 - 30 %</td>
</tr>
<tr>
<td>Zirconium Silicate</td>
<td>7440-67-7</td>
<td>10 - 40 %</td>
</tr>
<tr>
<td>Aluminous cement</td>
<td>12042-68-1</td>
<td>0 - 10 %</td>
</tr>
<tr>
<td>Amorphous silica</td>
<td>7631-86-9</td>
<td>&lt; 5 %</td>
</tr>
<tr>
<td>Aluminous silicate</td>
<td>1302-76-7</td>
<td>30 - 65 %</td>
</tr>
<tr>
<td>Others</td>
<td>&lt; 5 %</td>
<td></td>
</tr>
</tbody>
</table>

Main constituent: Silicato de Aluminio
CAS No.: 1302-76-7
EINECS No.: No
Impurities: No

4. FIRST-AID MEASURES

4.1 Description of first aid measures

Eye contact: Rinse with copious quantities of water and seek medical attention if irritation persists.
Inhalation: Movement of the exposed individual from the area to fresh air is recommended
Ingestion: Drink water. Seek immediately medical attention.
Skin contact: Wash with soap and water. Seek medical attention if irritation persists.

4.2 Most important symptoms and effects both acute and delayed

Eye contact: Temporal irritation or inflammation.
Inhalation: Irritation and dryness of throat and nose.
Ingestion: It may cause gastrointestinal problems.
Skin contact: Temporal irritation or exanthemas.
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4.3 Indication of any immediate medical attention and special treatment needed
No specific actions are required.

5. FIRE FIGHTING MEASURES

5.1 Extinguishing media
No specific extinguishing media is needed. It is compatible with all standard fire-fighting methods.

5.2 Special hazards arising from the substance or mixture
Non combustible. No hazardous thermal decomposition.

5.3 Advice for firefighters
No specific fire-fighting protection is required.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal cautions, protective equipment and emergency procedures
Avoid airborne dust generation and wear personal protective equipment in compliance with national legislation.

6.2 Environmental cautions
No special requirements.
Do not expose to airstream. Avoid littering. Avoid contact with soil and water.

6.3 Methods and material for containment and cleaning up
Avoid dry sweeping and use water spraying or vacuum cleaning systems to prevent airborne dust generation. Wear personal protective equipment in compliance with national legislation.

6.4 Reference for other sections
See sections 8 and 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling
- Avoid airborne dust generation.
- Provide appropriate exhaust ventilation at places where airborne dust is generated.
- In case of insufficient ventilation, wear suitable respiratory protective equipment.
- Handle packaged products carefully to prevent accidental bursting.
- Do not eat, drink and smoke in work areas.
- Wash hands after use.
- Remove contaminated clothing and protective equipment before entering eating areas.

7.2 Conditions for safe storage, including any incompatibilities - Technical measures / Precautions
- Minimize airborne dust generation and prevent wind dispersal during loading and unloading.
- Keep containers closed and store packaged products so as to prevent accidental bursting.
- Keep in dry and fresh place. Avoid bulk storage.

7.3 Specific end-uses
If you require advice on specific uses, please contact your supplier.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters
Follow workplace regulatory exposure limits for all types of airborne dust (e.g. total dust, respirable dust, respirable crystalline silica dust).

8.2 Exposure controls
Customers must check their national regulation where exposure limits are included.

<table>
<thead>
<tr>
<th>Compound</th>
<th>Exposure limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respirable dust</td>
<td>3mg/m³ in 8 hours</td>
</tr>
<tr>
<td>Inhalable dust</td>
<td>10 mg/m³ in 8 hours</td>
</tr>
<tr>
<td>Quartz</td>
<td>0,05 mg/m³, in 8 hours</td>
</tr>
<tr>
<td>Cristobalite</td>
<td>0,05 mg/m³, in 8 hours</td>
</tr>
</tbody>
</table>
8.2.1 Appropriate engineering controls
- Minimize airborne dust generation.
- Use process enclosures, local exhaust ventilation or other engineering controls to keep airborne levels below specified exposure limits.
- If user operations generate dust, fumes or mist, use ventilation to keep exposure to airborne particles below the exposure limit.
- Apply organizational measures, e.g. by isolating personnel from dusty areas.
- Remove and wash soiled clothes.

8.2.2 Individual protection measures, such as personal protective equipment
Eyes protection: Wear safety glasses with side-shields in circumstances where there is risk of penetrative eye injuries.
Skin protection: No specific requirement. For hands, see below.
Hands protection: Appropriate protection (e.g. protective clothing, barrier cream) is recommended for workers who suffer from dermatitis or sensitive skin. Wash hands at the end of each work session.
Respiratory protection: In case of prolonged exposure to airborne dust concentrations, wear respiratory protective equipment that complies with the requirement of European and national legislation.

8.2.3 Environmental exposure controls
Avoid wind dispersion.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties
Appearance: Granulated dry mass
Odour: Odourless
Colour: Grey
pH: Slightly Basic
Melting point: > 1650ºC
Relative density: 2.9 - 3.1 g/cm³ (2.900 - 3.100 kg/m³)
Solubility in water: Negligible

9.2 Other information
No other information.

10. STABILITY AND REACTIVITY

10.1 Reactivity
Inert, not reactive.

10.2 Chemical stability
Chemically stable

10.3 Possibility of hazardous reactions
No hazardous reactions.

10.4 Conditions to avoid
Not relevant.

10.5 Incompatible materials
No particular incompatibility.

10.6 Hazardous decomposition products
Not relevant.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects
a) Acute toxicity Based on available data, the classification criteria are not met.
b) Skin corrosion/irritation Based on available data, the classification criteria are not met.
c) Serious eye damage/irritation Based on available data, the classification criteria are not met.
d) Respiratory or skin sensitization Based on available data, the classification criteria are not met.
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e) Germ cell mutagenicity
Based on available data, the classification criteria are not met.

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

g) Reproductive toxicity
Based on available data, the classification criteria are not met.

h) Specific Target Organ Toxicity
   (STOT) - single exposure
Based on available data, the classification criteria are not met.

i) Specific Target Organ Toxicity
   (STOT) - repeated exposure
Based on available data, the classification criteria are not met.

j) Aspiration hazard
Based on available data, the classification criteria are not met.

12. ECOLOGICAL INFORMATION

12.1 Toxicity
Not relevant.

12.2 Persistence and degradability
Not relevant.

12.3 Bioaccumulative potential
Not relevant.

12.4 Movility in soil
Negligible

12.5 Results of PBT and vPvB assessment
Not relevant.

12.6 Other adverse effects
No specific adverse effects known.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Waste from residues/unused products
Where possible, recycling is preferable to disposal. Can be disposed of in compliance with local regulations.

Packaging
Dust formation from residues in packaging should be avoided and suitable worker protection must be assured.
Store used packaging in enclosed receptacles.
Recycling and disposal of packaging should be carried out in compliance with local regulation.

14. TRANSPORT INFORMATION

14.1 UN Number
Not relevant.

14.2 UN proper shipping name:
Not relevant.

14.3 Transport hazard classes

ADR: Not classified.
IMGD: Not classified.
ICAO/IATA: Not classified.
RID: Not classified.

14.4 Packing group
Not relevant.

14.5 Environmental hazards
Not relevant.

14.6 Special precautions for user
No special precautions.
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not relevant.

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
The mixture has not been classified as hazardous in the UE. Regarding exposure limits for EU countries refer to chapter 8.

15.2 Chemical safety assessment
Exempted from REACH Registration in accordance with Annex V.7.

16. OTHER INFORMATION

Indication of the changes made to the previous version of the SDS (Safety data sheet)
The necessary data has been introduced in order to comply with CLP regulation.

Third party materials
Insofar as materials not manufactured or supplied by INSERTEC are used in conjunction with, or instead of INSERTEC materials, it is the responsibility of the customer himself to obtain, from the manufacturer or supplier, all technical data and other properties relating to these and other materials and to obtain all necessary information relating to them. No liability can be accepted in respect of the use of INSERTEC products in conjunction with materials from another supplier.

Liability
Such information is to the best of INSERTEC’s knowledge and believed accurate and reliable as of the date indicated. However, no representation, warranty or guarantee is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use.