1 - Identification of the substance/Preparation and of the Company/Undertaking

- Identification of the substance or preparation: cement material reference
- Use of the substance/preparation: Determination of strengths of cement mortar
- Supplier codes: Blaine apparatus SN 2 c , Sn 2 BGa Sn2 Bca , Sn 200 BGa Sn200 Bca Sn 201 BGa Sn201 Bca Sn 2 BGa Sn203 Bca Sn 203 BGa Sn202 Bca Sn 202 BGa
- Company/undertaking identification: S.N.L. - Z.A. - 11370 LEUCATE (France)
- Phone: 33 (0) 4 68 40 14 05 - Fax: 33 (0)4 68 40 92 72 - E.mail: s.n.l@wanadoo.fr or contact@s-n-l.fr
- Emergency telephone: ORFILA (INRS) + 33 (0) 145 425 959

2 - Hazard identification:

Hazards: X1 irritant
- health:
  - The cement pour is irritating the eyes, pour the respiratory tract, mucous membranes and skin due to the partial hydration and pH FOLLOWS Who Raised.
  - Contact with Extended and REPEATED with skin May June AWARENESS coach dice due to trace elements such as hexavalent chromium That (Cr + 6).
  - In Case of significant ingestion, cement May cause digestive tract burns.
- Surroundings:
  - Cement will present no bold Individual Environment subject to the acceptance of the Recommendations section XIII, AND DISPOSAL The parents Qué the regulatory requirements ou local National Able apply.
- Physical and Chemical Hazards: None
- Specific hazards:

3 – Composition/Information on ingredients

Chemical characteristics: see technical data sheet;
- C.A.S. N°: 14808-60-7).
EINECS N°: 238-878-4
Hazardous components: cement
Classification:
4 – First aid measures:

- Being Able measures based on Applied routes of exposure:
  - Inhalation: breathe fresh air, see the doctor
  - Contact with the skin: - In case of contact with the skin Extended:
    - If dry cement is, to eliminate the maximum EC cement dust, then wash thoroughly with water.
    - If the cement is spoiled, rinse thoroughly with water
    - Pay attention to product Able exist between skin and clothing, watches, shoes.
    - Contact with eyes:
      - Immediately rinse with plenty of clean water and seek non ophthalmologist.
    - Ingestion:
      - In case of significant ingestion: Immediately rinse the mouth, drink water and consult a doctor not.

Not flammable and not explosive
Any means of extinction

6 – Accidental release measures

- Safety precautions for the individual: avoid the formation of dust. A specifically adapted breathing apparatus should be worn in a dusty atmosphere
- Precautions to protect the environment: no special precautions
- Method for cleaning: avoid dry sweeping. Use a steam or vacuum system to avoid creating dust

7 – Handling and storage

The manipulations:
  - Avoid soaring cement dust during use; if it can not be avoided, wear a dust mask.
  - Avoid direct contact of cement with skin and mucous membranes.
  - Precautions for handling:
  - The handling of bulk cement should be done by appropriate means to avoid flights of dust.
  - Protection against fire and explosion:
  - Storage:
    - Keep out of reach of children
    - Requirements for storage rooms and containers:
    - Information about storage:
      - Further information about storage conditions

8 – Exposure controls/Personal protection

Name of product: Standard sand  Update: 06/2009  PAGE: - 2 -
Additional information about design of technical facilities:
No further data; see item 7

- Components with threshold values that require monitoring at the workplace:
- Engineering Measures: Develop an aspiration, ventilation and filtration of dust emission points:
- Exposure Control: It exists for all without specific regulatory effect dust limit value:
  - 10 mg / m³ for total dust
  - 5 mg / m³ for respirable dust (art R232.5.5 Labour Code.).

- Personal protective equipment:
  - Eye protection:
  - Avoid contact with the eyes.
  - Hand protection:
  - Avoid contact with the skin.

- Components with threshold values that require monitoring at the workplace:
- Engineering Measures: Develop an aspiration, ventilation and filtration of dust emission points:
- Exposure Control: It exists for all without specific regulatory effect dust limit value:
  - 10 mg / m³ for total dust
  - 5 mg / m³ for respirable dust (art R232.5.5 Labour Code.).

- Personal protective equipment:
  - Eye protection:
  - Wear eye protection when soaring risk of dust or in case of risk of projection of powder or paste in the eye.
  - Respiratory protection:
  - Avoid contact with the respiratory system.
  - Hand protection:
  - Avoid contact with the skin.

- Components with threshold values that require monitoring at the workplace:
- Engineering Measures: Develop an aspiration, ventilation and filtration of dust emission points:
- Exposure Control: It exists for all without specific regulatory effect dust limit value:
  - 10 mg / m³ for total dust
  - 5 mg / m³ for respirable dust (art R232.5.5 Labour Code.).

- Personal protective equipment:
  - Eye protection:
  - Avoid contact with the eyes.
  - Hand protection:
  - Avoid contact with the skin.

9 – Physical and chemical properties

<table>
<thead>
<tr>
<th>Indications générales</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>Poudre</td>
</tr>
<tr>
<td>color</td>
<td>grise ou blanche</td>
</tr>
<tr>
<td>Odor</td>
<td>Inodore</td>
</tr>
<tr>
<td>Changement d'état</td>
<td></td>
</tr>
<tr>
<td>Point de fusion</td>
<td>1 610 °C</td>
</tr>
<tr>
<td>Point d'ébullition</td>
<td>2 230 °C</td>
</tr>
<tr>
<td>Point d'inflammation</td>
<td>Non applicable</td>
</tr>
<tr>
<td>Température d'inflammation</td>
<td>Non applicable</td>
</tr>
<tr>
<td>Masse volumique absolue</td>
<td>2.8 à 3.2 g/cm³ à 20 °C</td>
</tr>
<tr>
<td>Masse volumique apparente</td>
<td>0.9 à 1.2 g/cm³ à 20 °C</td>
</tr>
<tr>
<td>Danger d'explosion</td>
<td>non</td>
</tr>
<tr>
<td>Limites d'explosion</td>
<td></td>
</tr>
<tr>
<td>Inférieure</td>
<td>néant</td>
</tr>
<tr>
<td>Supérieure</td>
<td>néant</td>
</tr>
<tr>
<td>Point de fusion</td>
<td>&gt; 1 000°</td>
</tr>
<tr>
<td>Point d'ébullition</td>
<td>néant</td>
</tr>
<tr>
<td>Pression de vapeur à 20°</td>
<td>néant</td>
</tr>
<tr>
<td>Densité à 20° C</td>
<td>2600 kg/m³</td>
</tr>
<tr>
<td>Solubilité dans/miscibilité avec l'eau à 20°C</td>
<td>Jusque 1.5 g/l à 20°</td>
</tr>
<tr>
<td>Viscosité</td>
<td></td>
</tr>
<tr>
<td>Dynamique à 20° C</td>
<td>néant</td>
</tr>
<tr>
<td>Granulométrie</td>
<td>De l'ordre de 20 à 30 % de fines &lt;5µm.</td>
</tr>
</tbody>
</table>

10 – Stability and reactivity:
Thermal decomposition / conditions to avoid: No decomposition if used according to specifications.

- Dangerous reactions: No dangerous reactions known.
- Hazardous decomposition products: No known hazardous decomposition products.

Chemically stable, no particular incompatibility.

11 – Toxicological Information:

<table>
<thead>
<tr>
<th>Effects of acute exposure</th>
<th>Oral LD50</th>
<th>Skin LD 50</th>
<th>Inhalation LC 50/4 h</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4 894 mg/kg (rat)</td>
<td>48 mg/kg (mouse)</td>
<td>9 980 mg/l (mouse)</td>
</tr>
</tbody>
</table>

Primary irritant effect:
on the skin: Irritant to skin and mucous membranes
on the eye: irritation

- Sensitization: No sensitizing effects known
- CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Chronic toxicity: Silicosis (Table 25 occupational diseases)
Prolonged and / or massive exposure to respirable dust containing quartz can cause silicosis, pulmonary fibrosis caused by deposition in the lungs, particles of crystalline silicas of alveolar size.

The Institute of Occupational Medicine "(IOM) concluded, about the carcinogenicity of crystalline silica, the epidemiological evidence beam performed is inadequate to determine whether crystalline silica can be considered carcinogenic for men, however, can see a predisposition to developing lung cancer among people who already suffer from even silicosis if it is impossible to determine a direct effect of the silica for this cancer."

Scientific sources argue that respirable crystalline silica is not genotoxic.

There is also a good probability that the increased cancer risk is limited to people already suffering from silicosis. Thus, in the regulatory situation and current knowledge, personnel protection appears adequately ensured by compliance with the exposure limit values above.

References:
"Silica and Silica-Inducted Lung Diseases" V.Castranova V. Vallyathan & WE. 1996 CCR press.
"Epidemiological evidence on carcinogenicity of silica factor in scientific judgment” CA Soutar, A Robertson, BG Miller & A Searl 1997.
"Scientific opinion on the health effects of crystalline airborne silica” At Pilkington, W Maclaren A Searl JMG Davis JF Hurley & CA Soutar 1996.

12. – Ecological Information

General information
Water hazard class 3 () (Assessment by list): extremely hazardous
Do not allow to enter ground water, water course or sewage system, even in small quantities.
Danger to drinking water from leakage of a small amount in the small basement.

- Exposure from environmental protection: No ecotoxicity raised with respect to silica, natural substance abounded.

No adverse effects observed in our knowledge

13. – Disposal considerations
**Product recommendation:**
Should not be disposed of with household garbage. Do not allow to enter drains.

- Cleansing agents

**Disposal according to official regulations:**
- Waste from residues 1 Products not used

Can be disposed in accordance with local regulations. The product must be covered if necessary to prevent the emission of respirable dust.

Whenever possible, recycling should be preferred to the landfill.

- Packaging: No specific requirements. In all cases, it is necessary to prevent dust from forming residues remaining in the packaging and ensure appropriate protection of employees.

## 14. – Transport Information

*Land transport ADR / RID:*
- Marine transport IMDG:
- Air transport ICAO-TI and IATA-DGR:

There are no special precautions under transport regulations.

## 15. – Regulatory Information

- Labelling according to EEC directives: X1 - Irritant

- Clinker and possibly Portland blast furnace slag, silica fume, pozzolan, fly ash, calcined shale, limestone (see § II)

- Letter and hazard designation of product:

- Phrases: R36 / 37/38 irritating louse eyes, respiratory system and skin. R43 May cause sensitization by skin contact (Cr + 6).

- Phrases: S2 Keep out of reach of children. S24 / 25 avoid contact with skin and eyes. S26 in case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S37 wear suitable gloves

- Occupational disease: Code of Social Security: Table 8

- Disease professional nature: Code of Social Security: Sickness outside tables.

- Special medical surveillance: Not concerned.

## 16. – Other Information

This safety data sheet following the NF EN 197-1 February 2001 (Table 2).

**Disclaimer:** This information is the state of our knowledge and we see them as accurate and reliable as of the date of updating of this sheet. However, we do not intend here to express a point of view, a security or any guarantee as to their degree of updating, reliability or completeness.

It is the responsibility of the user to ensure himself this information is appropriate and complete with respect to the particular use made of our products.

Department issuing MSDS: Department