## Identification of the substance/Preparation and of the Company/Undertaking

- Identification of the substance or preparation: STANDARD SANDS
- Use of the substance/preparation: Determination of strengths of cement mortar
- Supplier codes: Standard sand EN 196-1 & ISO 679 - Standard sand EN 196-9 - Standard sand BS 1881 part 131 A 1/2.5, B 0.7/1.3, C 0.3/0.6, D 0.1/0.315, E 0.05/0.25 - Standard sand ASTM C778 - Standard sand NF P98 216.1.
- 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) 1 45 42 59 59

## Hazard identification:

- Silica sand does not present dangers in itself. However alveolar particles can be produced when handled. These particles can affect health.
  - Health hazards: inhalation of alveolar crystalline silica for prolonged periods or very long periods can cause pulmonary fibrosis, generally referred to as silicosis.
  - Environment hazards: none
  - Chemical and physical hazards: none
  - Specific risks: silicosis
  - Main symptoms: The main symptoms of silicosis are coughing and difficulty breathing. Exposure to dust must be controlled and recorded.

## Composition/Information on ingredients

Chemical characteristics: Quartz - Also known as Silica sand (SiO₂)
- C.A.S. N°: 14808-60-7
- EINECS N°: 238-878-4
- Hazardous components: Quartz
- Classification: Crystalline silica has not yet been given a classification by the European Community.
- Exempted from registration number in compliance with REACh article 2 §7.b and annex V.

## First aid measures:

Name of product: Standard sand  
Update: 06/2009  
PAGE: 1
Medical steps should be taken in accordance with the areas exposed:
- If inhaled: remove to fresh air and consult a doctor
- If there has been contact with the skin: wash
- If there has been contact with eyes: wash eyes
- If ingestion: non-toxic
- Protection for first aid administrators: none required
- Instructions for the doctor: no specific instructions

5 – Fire-Fighting Measures

- 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

- Handling (technical steps and precautions advice for use): Avoid creating dust, install appropriate ventilation in areas where dust is created. Where there insufficient ventilation, wear an appropriate breathing apparatus. Change and wash dusty clothing.
- Storage (Technical measures and precautionary steps): Collect and filter dust produced in the use of sand. Keep all containers closed.

8 – Exposure controls/Personal protection

- Control of exposure (for all duties with no specific effects the limits regulated to art. R232.5.5. of French Labour Code):
  - 10 mg/m³ for total dust
  - 5 mg/m³ for alveolar dust

France about silica, according to decree n° 97-331 of April 10, 1997 the limit of the average amount of concentrated free alveolar crystalline silica which can be inhaled by a worker in 8 hours is set at 0.1 mg/m³ for the quartz. Furthermore, a formula exists (additional clause) which makes it possible to check if the upper limit has been observed, when a mixture of alveolar dust made up partly of silica, in one or several forms, and partly of non silica dust exists.

\[
(C_{ns}/5 + C_{q}/0.1 + C_{c}/0.05 + C_{t}/0.05 = 1)
\]

(Cns, Cq, Cc, Ct represent respectively the dust Concentrations: non silica dust, quartz, cristobalite and tridymite, expressed in mg/m³). Each of these values is represented in the formula at the permitted levels.

Other Countries: Please refer to the annotation detailing various relevant legislation of which we are aware to date.

- Personal protection equipment:
  - Breathing protection when there is exposure to dust at higher levels than permitted by legislation wears a specially adapted protective breathing mask.
  - Hand protection: none
  - Eye protection: wear goggles with eye shields
  - Skin and body protection: none
  - Hygiene consideration:
    - do not shake work clothes
    - do not clear compressed air of dust

9 – Physical and chemical properties
- Physical state: solid
- SiO2: > 95 %
- Form: crystalline
- Form of grains: subangular - Color: white - Smell: odourless - pH: # 7
- Specific temperature for changes in physical state:
  - Fusion temperature: 1610°C
  - boiling temperature: 2230°C
- Decomposition temperature: none
- Flash Point: not applicable
- Self-inflammation temperature: not applicable
- Mass volume: absolute: 2,63 g/m³ - apparent: 1,6 g/cm³
- Solubility: insoluble in water, soluble in hydro-fluoric acid

10 – Stability and reactivity:

Chemically stable, no particular incompatibilities

11 – Toxicological information:

Effects of acute exposure:

<table>
<thead>
<tr>
<th></th>
<th>Oral</th>
<th>Skin</th>
<th>Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50</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 effect of irritation:
- Skin contact: irritating to skin and mucous membrane
- Eye contact: irritating

No sensitization effect known

Reproductive effect, Carcinogenicity, mutagenicity, toxicity:
Increased cancer risk would be limited to people already suffering from silicosis. Worker protection against silicosis would be assured by respecting the existing regulatory occupational exposure limits and implementing additional risk management measures where required (see§ 16).
Chronic toxic: silicosis
Prolonged or very long exposure to alveolar dust containing quartz can cause silicosis which is a pulmonary fibrosis caused by deposits of alveolar crystalline silica a in the lungs.

12. – Ecological information

No effect known. Natural product widely spread in the world.

13. – Disposal considerations

- Disposal instruction: waste from residual materials / Products not used:
- These can be disposed according to local regulations. The material should be covered to prevent breathable dust particles escaping. The silica sand has not been included in the EU Waste Catalogue.
- Where and when possible recycling is preferable to disposal.
- Containers: There are no specific conditions, just avoid dust emission during handling.

14. – Transport information
15. – Regulatory information

- There are no specific precautions mentioned in the legislation governing the transport of dangerous materials. Avoid creating dust.

- Refer to limits set out in the legislation of each country; OEL (Occupational Exposure Limit) for respirable crystalline silica dust, measured as an 8 hours TWA (Time Weighted Average).
- The material has not been classified by the European Community in legislation governing carcinogenic substances.
- French legislation refer to dangerous chemical agent regulations.

16. – Other information

- Mixing with other products: When products not made or supplied by our company are used, it is the responsibility of the client to obtain all the technical information from the supplier or manufacturer and any other information relating to these products, and to obtain all other relevant information.
- No responsibility will be accepted where our products are used with others.
- Liability: This information reflects our current knowledge and we consider it accurate and reliable at the time of updating this sheet. Nevertheless, we are not giving an opinion, not offering cautions or guarantees that we have provided the latest information available or that this information is reliable and comprehensive.
- It is the responsibility of the user to establish that this information is complete and adapted to the use which will be made of our products.
- A good practices Guide about “Worker health protection during handling of crystalline silica” is available from http://www.nepsi.eu