

Safety Data Sheet (in compliance with REACH Regulation EC 1907/2006)
Version: 002
Revision date: December 2009
1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING
1.1 Identification of the substance or preparation

| | |
|----------------------|--|
| Substance: | Quartz |
| Synonyms: | Silica flour, crystalline silica, silicon dioxide |
| Registration number: | Exempted according to Article 2 § (7) of REACH |
| Trade/Brand names: | SILMIX 300 / 300+ / 900+ SILMIX 1800 / 1800+ / 5000 |

1.2 Use of the substance or preparation

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|---|------------------------------------|
| Main applications of quartz flour – non exhaustive list | Industrial floors – Resin concrete |
|---|------------------------------------|

1.3 Company undertaking identification

| | |
|--------------------------------------|--|
| Company name: | SIBELCO FRANCE |
| Address: | 141 avenue de Clichy – 75848 Paris cedex 17 - FRANCE |
| Phone number: | 33 (0) 1 53 76 82 00 |
| Fax number: | 33 (0) 1 42 25 32 23 |
| Email of responsible person for SDS: | adm.commercial.paris@sibelco.fr |

1.4 Emergency telephone

| | |
|---------------------------------|----------------------|
| Emergency telephone number: | 33 (0) 1 53 76 82 00 |
| Available outside office hours: | No |

2. HAZARD IDENTIFICATION

Quartz flour is self-classified as Harmful (Xn), according to criteria defined in Directive 67/548/EEC, due to the potential for generation of airborne respirable crystalline silica.

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|-----------------------------------|---|
| Precautionary Information: | <p>The grain size distribution of this product gives potential for generation of airborne respirable dust during handling and use. Dust may contain respirable crystalline silica. Prolonged and or massive inhalation of respirable crystalline silica dust may cause lung fibrosis, commonly referred to as silicosis. Principal symptoms of silicosis are cough and breathlessness. Occupational exposure to respirable dust and respirable crystalline silica should be monitored and controlled.</p> <p>Because of the size of the product, crystalline silica dust is more likely to be generated in the working atmosphere by the processes of implementation of Silmix 300 / 300+ / 900+.</p> |
|-----------------------------------|---|

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Name | Chemical | EINECS | CAS | REACH Registr. No | Classification EU (67/548/EC) |
|--------|---------------------------------------|-----------|------------|-------------------|-------------------------------|
| Quartz | Silica - SiO ₂ > 94 à 97 % | 238-878-4 | 14808-60-7 | Exempted | None |

WE ARE WAITING FOR OUR SUPPLIERS' ANSWER ABOUT ADDITIVES IMPROVING THE IMPLEMENTATION OF THE SILMIX

4. FIRST AID MEASURES

No actions are to be avoided, nor are there any special instructions for rescuers.

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| Eye Contact: | Rinse with copious quantities of water immediately. In case of persistent irritation, consult a physician. |
| Ingestion: | Not hazardous. No special first aid measures necessary. |
| Inhalation: | No special first aid measures. Remove to fresh air and consult a physician if necessary. |
| Skin Contact: | Not hazardous. No special first aid measures necessary. |

5. FIRE FIGHTING MEASURES

The product does not burn. No hazardous releases in case of fire.

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|---|----------------|
| Suitable extinguishing media | Not applicable |
| Extinguishing media which should not be used | Not applicable |
| Special exposure hazards | Not applicable |
| Special protective equipment for fire fighters | Not applicable |

6. ACCIDENTAL RELEASE MEASURES

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| Personal precautions: | Avoid airborne dust generation. In case of prolonged exposure to airborne dust concentrations, wear respiratory protective equipment in compliance with national legislation. Remove and wash soiled clothing. |
| Environmental precautions: | No special requirements. |
| Methods for cleaning up: | Use water spraying or vacuum cleaning systems to prevent airborne dust generation. Avoid dry sweeping. |

7. HANDLING AND STORAGE
7.1 Handling

Avoid airborne dust generation.

Handle bags carefully so as to prevent accidental bursting.

Provide appropriate exhaust ventilation at places where airborne dust is generated. In case of insufficient ventilation, wear suitable respiratory protective equipment.

If you require advice on safe handling techniques please contact your supplier, or check the Good Practice Guide referred to in Section 16.

7.2 Storage

Ensure abatement of airborne dust produced during the loading of silos.

Keep containers closed and store bagged products so as to prevent accidental bursting.

7.3 Specific use(s)

For industry specific guidance, check the Good Practice Guide referred to in Section 16.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Exposure limit values

Respect workplace regulatory provisions for all types of airborne dust (total dust, respirable dust and respirable crystalline silica dust).

The OEL (Occupational Exposure Limit) for inert dust and respirable crystalline silica dust are respectively of 5 mg/m³ and 0,1 mg/m³ in France, measured as an 8 hour TWA (Time Weighted Average).).

Moreover, in case of simultaneous presence in respirable dust of crystalline silica, cristobalite and/or tridymite, the OEL is defined in France by the following formula:

$$\text{Cns} / 5 + \text{Cq} / 0,1 + \text{Cc} / 0,05 + \text{Ct} / 0,05 \leq 1$$

Where Cns, Cq, Cc, Ct are the respective concentrations in mg/m³ of inert dust, quartz, cristobalite and tridymite.

For the equivalent limits in other countries, please consult a competent occupational hygienist or the local regulatory authority.

8.2 Exposure controls:

8.2.1 Occupational exposure controls :

Control of occupational exposure may be achieved by enclosing plant and equipment and by ensuring good standards of ventilation in the workplace. Provide appropriate local exhaust ventilation in places where airborne dust is generated. Isolate personnel from dusty areas. In case of insufficient ventilation, wear suitable respiratory protective equipment. Maintain good hygiene standards and wash soiled clothing regularly.

| | |
|--------------------------------|--|
| Respiratory protection: | In case of prolonged exposure to airborne dust concentrations, wear respiratory protective equipment (e.g. dust mask or respirator with particulate filter) that complies with EN149:2001. It is good practice to conduct fit-testing when selecting respiratory protective equipment. |
| Hand protection: | No specific hazard. |
| Eye protection: | Wear safety goggles or safety glasses with side-shields in circumstances where there is a risk of penetrative eye injuries |
| Skin protection: | No specific hazard. |

8.2.2 Environmental exposure controls

No specific requirements

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 General information

| | |
|-------------|---|
| Appearance: | Solid, granular, colour from white to white grey according to the different qualities |
| Odour: | Odourless |

9.2 Important health, safety and environmental information

| | |
|----------------------|---|
| Density: | From 2,635g/cm ³ to 2,660 g/ cm ³ |
| Grain Shape: | Sub angular grains |
| Particle size range: | See technical data sheet |
| pH: | See technical data sheet |

| | |
|--|----------------|
| Water solubility: | No |
| Solubility in hydrofluoric acid: | Yes |
| Boiling point/boiling range: | Not applicable |
| Flash point: | Not applicable |
| Flammability (solid, gas): | Not applicable |
| Explosive properties: | Not applicable |
| Oxidising properties: | Not applicable |
| Vapour pressure: | Not applicable |
| Relative density: | Not applicable |
| Partition coefficient: n-octanol/water | Not applicable |
| Viscosity: | Not applicable |
| Vapour density: | Not applicable |
| Evaporation rate: | Not applicable |

9.3 Other information

| | |
|----------------|----------|
| Melting point: | 1 610° C |
|----------------|----------|

10. STABILITY AND REACTIVITY

10.1 Conditions to avoid

No particular incompatibility

10.2 Materials to avoid

No particular incompatibility

10.3 Hazardous decomposition products

Chemically stable

11. TOXICOLOGICAL INFORMATION

11.1 Acute effects

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|------------------|---------------------------------|
| Skin irritation: | Possible irritation of the skin |
| Eye irritation: | Possible irritation of the eyes |

11.2 Chronic effects

Prolonged and/or massive exposure to respirable crystalline silica-containing dust may cause silicosis, a nodular pulmonary fibrosis caused by deposition in the lungs of fine respirable particles of crystalline silica.

In 1997, IARC (the International Agency for Research on Cancer) concluded that crystalline silica inhaled from occupational sources can cause lung cancer in humans. However it pointed out that not all industrial circumstances, nor all crystalline silica types, were to be incriminated. (*IARC Monographs on the evaluation of the carcinogenic risks of chemicals to humans, Silica, silicates dust and organic fibres, 1997, Vol. 68, IARC, Lyon, France.*)

In June 2003, SCOEL (the EU Scientific Committee on Occupational Exposure Limits) concluded that the main effect in humans of the inhalation of respirable crystalline silica dust is silicosis.

“There is sufficient information to conclude that the relative risk of lung cancer is increased in persons with silicosis (and, apparently, not in employees without silicosis exposed to silica dust in quarries and in the ceramic industry). Therefore preventing the onset of silicosis will also reduce the cancer risk...” (*SCOEL SUM Doc 94-final, June 2003*).

So there is a body of evidence supporting the fact that increased cancer risk would be limited to people already suffering from silicosis. Worker protection against silicosis should be assured by respecting the existing regulatory occupational exposure limits and implementing additional risk management measures where required (see IMA-Europe table of OELs in the EU at <http://www.ima-eu.org/en/publication.htm>)

12. ECOLOGICAL INFORMATION

No specific adverse effects known. Not persistent, not bio accumulative.

13. DISPOSAL CONSIDERATIONS


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|---|---|
| Waste from residues/unused products: | Can be landfilled in compliance with local regulations. The material should be buried to prevent dust being picked up by the wind. Where possible, recycling is preferable to disposal. |
| Packaging: | No specific requirements. Recycling and disposal of packaging should be carried out by an authorised waste management company. |

14. TRANSPORT INFORMATION

No special precautions are required under regulations relating to the transportation of dangerous goods.

15. REGULATORY INFORMATION

| National Legislation | |
|-----------------------------|--|
| | <p>Code du Travail (Labour laws references): article R. 4411-3 and following ones.</p> <p>- Code du Travail (Labour laws references): article R. 4624-19 & 20: increased medical supervision for specific occupational risks (article L. 4111-6 and special decrees issued under).</p> <p>Code du Travail (Labour laws references): articles R. 4412-27 and following ones: control of limit value for occupational exposure.</p> <p>Code du Travail (Labour laws references): articles R. 4412-154 and following one.</p> <p>Decree 2009-1570 dated December 15th 2009 about control of limit value for occupational exposure on workplace.</p> <p>- Tableaux des maladies professionnelles (List of occupational diseases): code of the Social Security, Art. L. 461-1 à L. 461-8.</p> <p>- Tableaux des maladies à caractère professionnel (List of diseases with an occupational character): code of the Social Security, Art. L. 461-6 and Art. D. 461-1.</p> <p>Affections of respiratory tracts susceptible to have an occupational origin. Fiche toxicologique (toxicological file) of the INRS N° 232.</p> <p>Besides, in France, quartz sand containing more than 5 % of free crystalline silica cannot be used for dry blasting. (Cf. decree N° 69-558 dated June 6th, 1969: JO dated June 11th 1969 - Circular TE 7-72 dated March 8th 1972 and Order dated January 14th, 1987).</p> <p>As such, all packagings wear the following mention: "Silice libre supérieure à 5 %" - Utilisation réglementée : Décret n° 69558 du 6/06/1969 et Arrêté du 14/01/1987).</p> <p>("Free Silica superior to 5 % - Regulated use: Decree N° 69558 dated 6/06/1969 and Order dated 14/01/1987 ").</p> |

| European Legislation | |
|---|--|
| Quartz flour is self-classified as Harmful (Xn), according to criteria defined in Directive 67/548/ EEC, due to the potential for generation of airborne respirable crystalline silica. | |
| Hazard symbol: | |
| |  |
| Symbol letter: | Xn |
| Indication of danger: | Harmful |
| R-phrases: | R48/20 |
| | Harmful: danger of serious damage to health by prolonged exposure through inhalation |
| S-phrases: | S22 |
| | Do not breathe dust |
| | S38 |
| | In case of insufficient ventilation wear suitable respiratory protective equipment |
| International Legislation | |
| | Please consult in Annex 1 an indicative list of OEL (Occupational Exposure Limit) for respirable crystalline silica dust, measured as an 8 hours TWA (Time Weighted Average) in application in members EU countries in 2008. |
| | Crystalline silica has not been classified as carcinogenic by the EU. |

16. OTHER INFORMATION

Third party materials:

Insofar as materials not manufactured or supplied by Sibelco France are used in conjunction with, or instead of Sibelco France 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 Sibelco France Silmix in conjunction with materials from another supplier.

Liability:

Such information is to the best of Sibelco France knowledge and belief 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.

Social Dialogue on Respirable Crystalline Silica:

A multi-sectoral social dialogue agreement on *Workers Health Protection through the Good Handling and Use of Crystalline Silica and Products Containing it* was signed on April, 25th 2006. This autonomous agreement, which receives the European Commission's financial support, is based on a Good Practices Guide. The requirements of the Agreement came into force on October, 25th 2006. The Agreement was published in the Official Journal of the European Union (2006/C 279/02). The text of the Agreement and its annexes, including the Good Practices Guide, are available from <http://www.nepsi.eu> and provide useful information and guidance for the handling of products containing respirable crystalline silica.

References:

Literature references are available on request from EUROSIL, the European Association of Industrial Silica Producers, Twin Gardens (6th floor), rue des Deux Eglises 26, B-1000 Brussels, Belgium. Tel: +32 2 210 44 10, Fax: + 32 2 210 44 29, e-mail: secretariat@ima-europe.eu, www.ima-europe.eu.



SILMIX

**141 Avenue de Clichy – 75848 PARIS CEDEX 17 - FRANCE
33 (0) 1 53 76 82 00 – 33 (0) 1 42 25 32 23**

**ACKNOWLEDGEMENT OF RECEIPT
SAFETY DATA SHEET**

Company:

Address:

Fax:

E-mail:

Declare to have received and read the safety data sheet in 16 points -Dated December 2009- concerning the product below.

SILMIX

DATE :

SIGNATURE :

STAMP :