

SAFETY DATA SHEET

In compliance with Regulation EC 1907/2006, Regulation EC 1272/2008 and Regulation EC 453/2010

Version: 004

Revision date: March 2012

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING
1.1 Identification of the substance or preparation

Substance	Quartz flour
Synonyms	Silica flour, crystalline silica, silicon dioxide
REACH Registration number	Exempted in accordance with Annex V.7
Trade/Brand names	SILICA FLOUR – MICRONIZED SILICA
Commercial products	Silica Flour C400 – Micronized silica E600 – C500 – C600 – C800

1.2 Use of the substance or preparation

Main applications of quartz flour – non exhaustive list	Glass - Glass fibre - Construction - Ceramics - Paint - Fillers Adhesives - Plastics - Rubber sealants - Special Concrete - Silicone
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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
2.1

Classification of the substance or mixture	<p>This product contains respirable quartz as an impurity and therefore is classified as STOT RE1 according to criteria defined in the Regulation EC 1272/2008 and harmful according to criteria defined in Directive 67/548/EEC due to the potential for generation of airborne respirable crystalline silica.</p> <p>Depending on the type of handling and use (e.g. grinding, drying), airborne respirable crystalline silica may be generated. 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 crystalline silica dust should be monitored and controlled.</p> <p>This product should be handled with care to avoid dust generation</p>
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Regulation EC 1272/2008	 DANGER : STOT RE1 H372: Causes damage to lung through prolonged or repeated exposure by inhalation.
Classification EU (67/548/EEC)	 Symbol letter: Xn Identification of danger: Harmful R-Phrases: R48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation. This product contains more than 10 % quartz respirable.

2.2 Label elements

Signal Word Hazard statement Precautionary statements	 DANGER H372: causes damage to lung through prolonged or repeated exposure by inhalation. P260: Do not breathe dust. P285: In case of inadequate ventilation wear respiratory protection. P501: Dispose of contents/containers in accordance with local regulation.
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2.3 Other hazards

This product is an inorganic substance and does not meet the criteria for PBT « *Persistent Bioaccumulative and Toxic* » or vPvB « *very Persistent and very Bioaccumulative* » in accordance with Annex XIII of REACH.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Main constituent

Name	Chemical	EINECS	CAS
Quartz	Silica - Silicon dioxide (SiO ₂) > 99 %	238-878-4	14808-60-7

3.2 Impurities

This product contains more than 10 % of quartz respirable, which is classified as STOT RE1.

4. FIRST AID MEASURES

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

Eye Contact	Rinse with copious quantities of water and seek medical attention if irritation persists.
Ingestion	Not hazardous. No special first aid measures required.
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.

4.2 Most important symptoms and effects, both acute and delayed

No acute and delayed symptoms and effects are observed.

4.3 Indication of any immediate medical attention and special treatment needed

No specific actions are required.

5. FIRE FIGHTING MEASURES

Suitable extinguishing media	No specific extinguishing media is needed.
Extinguishing media which should not be used	None
Special exposure hazards	Non combustible. No hazardous thermal decomposition.
Special protective equipment for fire fighters	No specific fire-fighting protection is required.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	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 clothes.
Environmental precautions	No special requirements.
Methods for containment and cleaning up	Avoid dry sweeping and use water spraying or vacuum cleaning systems to prevent airborne dust generation. If necessary, wear personal protective equipment in compliance with national legislation.
Reference to other sections	See sections 8 and 13.

7. HANDLING AND STORAGE

7.1 Precaution for safe handling

7.1.1. 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.

7.1.2 Do not to 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

Minimise airborne dust generation and prevent wind dispersal during loading and unloading.

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

7.3 Specific end use(s)

In case of use in conjunction with other products, precautions to avoid dispersion of dust during the handling or storage must be taken.

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

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Respect workplace regulatory provisions for controlling 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

Minimise 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 organisational measures, e.g. by isolating personnel from dusty areas. Remove and wash soiled clothing.

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.

8.2.2 Individual protection measures, such as personal protective equipment

Eye protection	Wear safety goggles or safety glasses with side-shields in circumstances where there is a risk of penetrative eye injuries.
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.

QUARTZ FLOUR

STOT RE1 : quartz respirable $\geq 10\%$

Hand protection	No specific hazard. Appropriate protection (e.g. gloves, barrier cream) is recommended for workers who suffer from dermatitis or sensitive skin. Wash hands at the end of each work session.
Skin protection	No specific requirements

- 8.2.3 **Environmental exposure controls**
No specific requirements. Avoid wind dispersal.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 General information

Appearance:	Solid, white powder
Odour:	Odourless

9.2 Important health, safety and environmental information

Density:	2,65g/cm ³
Grain Shape:	Angular
Particle size range:	See technical data sheet
pH:	See technical data sheet
Water solubility:	Negligible
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

Bulk Density:

SILICA FLOUR C400 : 0,84	MICRONIZED SILICA E600	: 0,45
	MICRONIZED SILICA C500	: 0,48
	MICRONIZED SILICA C600	: 0,40
	MICRONIZED SILICA C800	: 0,36

9.3 Other information

Melting point:	1 610° C
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10. STABILITY AND REACTIVITY

10.1 Reactivity

Inert, not reactive

10.2 Chemical stability

Chemically stable

10.3 Conditions to avoid

Not relevant

10.4 Possibility of hazardous reactions

No hazardous reactions

10.5 **Incompatible materials**
No particular incompatibility

10.6 **Hazardous decomposition products**
Not relevant

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity	Based on available data, the classification criteria are not met.
Skin corrosion/irritation	Based on available data, the classification criteria are not met.
Serious eye damage/irritation	Based on available data, the classification criteria are not met.
Respiratory or skin sensitisation	Based on available data, the classification criteria are not met.
Germ cell mutagenicity	Based on available data, the classification criteria are not met.
Carcinogenicity	Based on available data, the classification criteria are not met.
Reproductive toxicity	Based on available data, the classification criteria are not met.
STOT -single exposure	Based on available data, the classification criteria are not met.

- STOT -repeated exposure:

This product contains quartz respirable as an impurity and therefore is classified as STOT RE2 according to criteria defined in the Regulation EC 1272/2008.

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>).

Aspiration hazard	Based on available data, the classification criteria are not met.
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12. ECOLOGICAL INFORMATION

- 12.1 **Toxicity**
No relevant
- 12.2 **Persistence and degradability**
No relevant
- 12.3 **Bioaccumulative potential**
No relevant
- 12.4 **Mobility in soil**
Negligible
- 12.5 **Results of PBT and vPvB assessment**
No relevant
- 12.6 **Other adverse effects**
No specific adverse effects known

13. DISPOSAL CONSIDERATIONS

Waste from residues/unused products:	Where possible, recycling is preferable to disposal. Can be disposed in compliance with local regulations. The material should be buried to prevent dust being picked up by the wind.
Packaging:	Dust formation from residues in packaging should be avoided and suitable worker protection assured. Storage used packaging in closed containers. The re-use of packaging is not recommended. Recycling and disposal of packaging should be carried out by an authorised waste management company.

14. TRANSPORT INFORMATION

- 14.1 **UN number**
No relevant
- 14.2 **UN proper shipping name**
No relevant
- 14.3 **Transport hazard class(es)**
ADR: not classified
IMDG: not classified
ICAO/IATA: not classified
RID: not classified
- 14.4 **Packing group**
No relevant
- 14.5 **Environmental hazards**
No relevant
- 14.6 **Special precautions for user**
No relevant
- 14.7 **Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**
No relevant

15. REGULATORY INFORMATION

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

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.</p> <p>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). ("Free Silica superior to 5 % - Regulated use: Decree N° 69558 dated 6/06/1969 and Order dated 14/01/1987 ").</p>
European Legislation	
Dry Blasting	<p>According to national regulations in EU member states, abrasives containing more than a certain amount of free crystalline silica cannot be used for dry blasting.</p> <p>This amount varies between 1 % and 5 %, according to country.</p>
International Legislation	
	<p>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.</p> <p>Crystalline silica has not been classified as carcinogenic by the EU.</p>

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

- Articles 1: 1.1 & 9: 9.2

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 Quartz Flour 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.

Training

Workers must be informed of the presence of crystalline silica and trained in the proper use and handling of this product as required under applicable regulations.

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.

**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 March 2012-
concerning the product below.

SILICA FLOUR – MICRONIZED SILICA

DATE :

SIGNATURE :

STAMP :