SILESTONE

Material Safety Data Sheet

THE ORIGINAL

01 IDENTIFICATION OF THE ARTICLE AND OF THE COMPANY/UNDERTAKING

Name of Material: Silestone®

Use of Material: Quartz surfacing designed for use indoors, particularly kitchen and bathroom worktops, flooring, cladding and other similar uses.
Avoided uses: Do not elaborate the material by dry processes.

Name of the company: Cosentino, S.A. Ctra. A-334. Km 59 Cantoria (Almería) España.
Telephone: +34 950 44 41 75 / Fax: +34 950 44 42 26
www.cosentinogroup.net
Person in charge of MSDS, Eric Cortijo; e-mail: ecortijo@cosentinogroup.net

Phone number in case of emergency: Toxicology Helpline: +34 91 562 04 20

02 HAZARDS IDENTIFICATION

There is no provision for any risk associated with the finished Silestone® material in the CLP (EC) regulation nº. 1272/2008. However respirable crystalline silica dust can be generated in manufacturing operations. Respirable crystalline silica causes harm to the lungs, such as silicosis, through prolonged or repeated exposure (Hazard H372). A series of preventative measures should be adopted to prevent or minimise exposure.

Contens of crystalline silica 70%-90%.

GHS08
STOT RE1

HAZARD:
H372 Causes damage to lungs through prolonged or repeated exposure (inhalation).

PREVENTION:
P260 Do not breathe dust generated in the cutting, grinding and polishing processes.
P264 Wash face and hands thoroughly after handling.
P270 Do not eat, drink or smoke when using this material.
P284 Wash respiratory protection for particles (P3).
FIRST AID MEASURES
P314 Get medical advice/attention if you feel unwell.
P501 Dispose of remains in accordance with local regulation.

Classification according to directive 1999/45/EC

Xn

R20 Harmful by inhalation
R48 Danger of serius damage to health by prolonged exposure.

S22 Do not breath the dust.
S38 Use personal protective equipment P3.

03 COMPOSITION/INFORMATION ON INGREDIENTS

General description of the components: The material is made up of inorganic mineral deposits (85-95%), including, but not limited to, silica sands, quartz, crystobalite, glass and others, polyester (5-15%), pigments and additives (<5%). Contens of crystalline silica 70%-90%. (quartz and/or crystobalite).

- CRYSTALLINE SILICA - QUARTZ: CAS 14808-60-7 / EINECS 238-878-4.
- CRYSTALLINE SILICA - CRYSTOBALITE: CAS 14464-46-1 / EINECS: 238-455-4

The end material is certified by the Greenguard Environment Institute fulfilling the quality regulations for the indoor use of volatile organic compounds (Certification Nº 2903-410 for Indoor Air Quality & 2904-420 for Children & Schools). The product holds other certifications confirming its commitment to the environment and health and safety such as the ISO 14001 and the NSF.

04 FIRST AID MEASURES

The finished material do not required special measures. Following is for the process of fabrication:

Contact with eyes: Keep your eyes open and wash thoroughly with lots of water.
Contact with skin: Wash with soap and water.
Inhalation: Bring the affected employee to a well-ventilated place. Additional ventilation may be required if the employee has suffered a serious reaction. Properly ventilate the work area.
Seek medical advice if you feel unwell.

05 FIREFIGHTING MEASURES

Fire-resistant	Category: B, s1, d0 / Bfl, s1
Suitable extinguishing agents	Any suitable agent for surrounding fires. Extinguishers of polyvalent powder are recommended.
Personal Protection Equipment	Depending on the surrounding fire.

06 ACCIDENTAL RELEASE MEASURES

The material does not represent risk of spillage.

07 HANDLING AND STORAGE

Manual handling.
The user has the responsibility to carry out a risk evaluation according to the local risk prevention law. We recommend the following precautions:
- Safe manipulation systems should be used (crane, A-frame with safety bars). The slings must be well protected/resistant as the material is more cutting than natural stone.
- Use following Personal Protective Equipment. Wear helmet, safety shoes, safety glasses, and gloves during the handling and storage operations of Silestone.

Environmental protection precautions.
We recommend the use of water-cooled tools to prevent the creation of dust.

Storage.
There are no specific conditions for safe storage, except that it should be properly stored in a closed and covered place. Avoid strong impacts that may cause the material to break.

08 EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure limit values.
The user has the responsibility to carry out a risk evaluation of dust exposure according to the local risk prevention law.

Occupational Exposure Limits in mg/m³ 8 hours TWA - Respirable dust - in EU 271 + Norway & Switzerland

Country/Authority	Inert dust	Quartz (q)	Cristobalite (c)	Tridymite (t)
Austria / I	6	0,15	0,15	0,15
Belgium / II	3	0,1	0,05	0,05
Bulgaria / III	4	0,07	0,07	0,07
Cyprus / IV	/	10k/Q[2]	/	/
Czech Republic / V		0,1	0,1	0,1
Denmark / VI	5	0,1	0,05	0,05
Estonia		0,1	0,05	0,05
Finland / VII		0,2	0,1	0,1
France / VIII		5 or 25 k/Q		
France / IX	5	0,1	0,05	0,05
Germany / X	3	/[3]	/	/
Greece / XI	5	0,1	0,05	0,05
Hungary		0,15	0,1	0,15
Ireland / XII	4	0,05	0,05	0,05
Italy / XIII	3	0,025	0,025	0,025
Lithuania / XIV	10	0,1	0,05	0,05
Luxembourg / XV	6	0,15	0,15	0,15
Malta / XVI[4]	/	/	/	/
Netherlands / XVII	5	0,075	0,075	0,075
Norway / XVIII	5	0,1	0,05	0,05
Poland		0,3	0,3	0,3
Portugal / XIX	5	0,025	0,025	0,025
Romania / XX	10	0,1	0,05	0,05
Slovakia		0,1	0,1	0,1
Slovenia		0,15	0,15	0,15
Spain / XXI	3	0,1	0,05	0,05
Sweden / XXII	5	0,1	0,05	0,05
Switzerland / XXIII	6	0,15	0,15	0,15
United Kingdom / XXIV	4	0,1	0,1	0,1

[1] Missing information for Latvia. - To be completed.
[2] Q : quartz percentage - K=1
[3] Germany has no more OEL for quartz, cristoba lite, tridymite. Employers are obliged to minimize exposure as much as possible, and to follow certain protective measures.
[4] When needed, Maltese authorities refer to values from the UK for OELVs which do not exist in the Maltese legislation.

Country		Adopted by/Law denomination	OEL Name (if specific)
Austria	I	Bundesministerium für Arbeit und Soziales.	Maximale ArbeitsplatzKoncentration (MAK)
Belgium	II	Ministère de l'Emploi et du Travail.	
Bulgaria	III	Ministry of Labour and Social Policy and Ministry of Health. Ordinance n°13 of 30/12/2003.	Limit Values
Cyprus	IV	Department of Labour Inspection. Control of factory atmosphere and dangerous substances in factories, Regulations of 1981.	
Czech Republic	V	Governmental Directive n°441/2004.	
Denmark	VI	Direktoratet fot Arbeidstilsynet.	Threshold Limit Value
Finland	VII	National Board of Labour Protection.	Occupational Exposure Standard
France	VIII	Ministère de l'Industrie (RGIE).	Empoussiérage de référence
	IX	Ministère du Travail.	Valeur limite de Moyenne d'Exposition
Germany	X	Bundesministerium für Arbeit.	Maximale ArbeitsplatzKoncentration (MAK)
Greece	XI	Legislation for mining activities.	
Ireland	XII	2002 Code of Practice for the Safety, Health & Welfare at Work (CoP).	
Italy	XIII	Associazone Italiana Degli Igienisti Industriali.	Threshold Limit Values (based on ACGIH TLVs)
Lithuania	XIV	Del Lietuvos higienos normos HN 23:2001.	Ilgalaikio poveikio ribine verte (IPRV)
Luxembourg	XV	Bundesministerium für Arbeit.	Maximale ArbeitsplatzKoncentration (MAK)
Malta	XVI	OHSA –LN120 of 2003, www.ohsa.org.mt	OELVs
Netherlands	XVII	Ministerie van Sociale Zaken en Werkgelegenheid.	Publieke grenswaarden http://www.ser.nl/en/oel_database.aspx
Norway	XVIII	Direktoratet for Arbeidstilsynet.	Administrative Normer (8hTWA) for Forurensing I ArbeidsmiljØet
Portugal	XIX	Instituto Portuges da Qualidade, Hygiene & Safety at Workplace NP1796:2004.	Valores Limite de Exposição (VLE)
Romania	XX	Government Decision n° 355/2007 regarding workers' health surveillance. Government Decision n° 1093/2006 regarding carcinogenic agents (in Annex 3: Quartz, Cristobalite, Tridymite).	OEL
Spain	XXI	Instrucciones de Técnicas Complementarias (ITC) Orden ITC/2585/2007	Valores Limites
Sweden	XXII	National Board of Occupational Safety and Health	Yrkeshygieniska Gränsvärden
Switzerland	XXIII		Valeur limite de Moyenne d'Exposition
United Kingdom	XXIV	Health & SafetyExecutive	Workplace Exposure Limits

Source: IMA-Europe. Date: May 2010, updated version available at http://www.ima-europe.eu/otherPublications.html

Exposure Controls. (Manufacturing and installation).

The manufacturer recommends methods that involve the use of water in the manufacturing of this material. Dust derived from the manufacturing processes could contain repirable crystalline silica (SiO_2).
Long term exposure to dust derived from the cutting and manufacturing processes without the use of suitable protection may cause serious deseases including pneumoconiosis such as silicosis, as well the deterioration of other lungs diseases such as bronchitis, emphysema, etc.

Exposure to dust may be monitored and controlled with suitable control measures such as:

- Prevent or minimise dust generation. In manufacturing operations use equipment provided with water supply system. The water should be clean, abondante and directed to the points of cutting, grinding and polishing.

- Prevent or minimise dust being released into the environment. Use dust extraction systems in the area where it is generated.

- Indicate and demarcate hazard areas.
- Perform periodic control of the environmental concentration of respirable crystalline silica.
- Natural and/or mechanical ventilation systems that ensure the renewal of air in the work place.
- Cleaning and maintenance. Use of vacuum and/or water cleaning systems, avoid sweeping and the use of compressed air, which creates dust. Preventive maintenance programmes of the installations to ensure the correct conditions of order, cleaning and operation of work equipment.
- Always use respiratory protection for P3 type particulates according to EN 143:2001 and its revisions EN 143/AC 2002, EN 143/AC 2005, including working with water as a dust-reducing agent during the preparation of Silestone®.
- Hand Protection. Use gloves to avoid the risk of cutting when handling pieces.
- Eye protection. Use eye protection in accordance with regulation EN166:2001.
- Skin protection. We recommend that work clothes are worn to avoid the contact of dust with skin. Wash hands and face with soap and water to remove dust before breaks and at end of the shift.
- Work clothes: do not clean up using compressed air, use cacuum cleaning methods.
- Do not eat or drink in work areas.
- Change out of work and/or protective uniform and clean one self up before eating lunch.
- At the end of the working day, clean oneself up, shower if necessary change into clean clothes before leaving work.
- Establish a specific health monitoring system
- The parts must leave the workshop totally finished and ready to be installed by the installer.

09 PHYSICAL AND CHEMICAL PROPERTIES

Apect: Solid, according to commercial range.
Colour: commercial range.
Odour: Odourless.
pH: N/A.
Miscibility (in water): N/A.
Water absorption (EN-14617-1): (0.04-0.20) %.
Density (EN-14617-1): 2250-2450 kg/m_3
Compression resistance (EN-14617-15): 112-248 MPa.
Bending stress (EN-14617-2): 29-70 MPa
Coefficient of thermal expansion (EN-14617-11): 7-8·10-6 ºC-1
Autoignition temperature: N/A.
Fire point: N/A.

10 STABILITY AND REACTIVITY

Conditions to avoid:
Avoid contact with surfaces at temperatures above 150 º C.
Avoid strong impacts that may cause the material to break. Avoid use in outdoors areas.
Decomposition products: Unknown.

11 TOXICOLOGICAL INFORMATION

Toxicological Helpline (Spain): +34 91 562 04 20
Dust derived from the manufacturing processes could contain respirable crystalline silica (SiO_2).

Long term exposure and/or mass fraction of respirable crystalline silica may cause severe damage to health including pulmonary fibrosis and pneumoconiosis such as silicosis, as well the deterioration of other lungs diseases such as bronchitis, emphysema, etc. The main symptom of silicosis is the reduced capacity of the lung.

Persons affected by silicosis have a higher risk of suffering from lung cancer.

12 ECOLOGICAL INFORMATION

Silestone® does not contain ecotoxins, but due to its physicochemical nature it inhibits the growth of microorganisms on its surface.

13 DISPOSAL CONSIDERATIONS

In accordance with European Directives 91/156/EEC and 199/31/CEE and the law 10/98, April 21 and RD 1481/2001, 27 December, a product that does not meet quality specifications or is rejected can be disposed off at inert waste landfills.
The Silestone® packaging will be disposed off according to country regulations. In general, they will be deposited in plastic or paper containers depending on whether or not it can be recycled.

14 TRANSPORT INFORMATION

The material is not classified as dangerous according to air, land and sea transport regulations.

UN Number	unassigned	Sea transport	
Packaging group	none	IMDG/IMO	no restricted

Road and rail transport		Air transport	
ADR/RID		ICAO/IATA	no restricted
TPC/TPF	no restricted		

15 REGULATORY INFORMATION

This Safety Data Sheet (MSDS) has been prepared according to CLP Regulation, (EC) No 1272/2008.
Labelled according to European EEC directives.

16 OTHER INFORMATION

Check with Cosentino, SA before using or supplying this material for other applications, different to those previously stated.

The information in this document is to our knowledge up-to-date and accurate. However, we cannot guarantee the recommendations or suggestions herein, as the material conditions of use are beyond our control. In addition, the contents of this safety data sheet must not be interpreted as a recommendation to use any product in violation of the laws, safety practices or patents in force on any material or its use.

It is the responsibility of the recipient of our material to check the corresponding rules and regulations. Under no circumstances does the data contained in this Safety Data Sheet constitute a guarantee of specific properties or create any contractual relationship.

This Safety Data Sheet (MSDS) is according to the CLP Regulation, (EC) No 1272/2008.

For further information follow the instructions in the Guide to Good Practice for Preparation published by the manufacturer. Information available www.silestone.com

You can get further information in http://www.nepsi.eu/ and the Guide to Good Practice for the Agreement on Workers' Health Protection Through the Good Handling and Use of Crystalline Silica and Products Containing it, published by NEPSI.