

01 IDENTIFICATION OF THE ARTICLE AND OF THE COMPANY/UNDERTAKING

Name of Material: **Engineered stone Technistone® Exterior**

Use of Material: Wall tiles for cladding of building's construction and outdoor walls.

Avoided uses: Do not elaborate the material by dry processes.

Name of the company: Technistone a.s.
Residence: Bratří Štefanů 1070, 500 03 Hradec Králové, Czech Republic
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E-mail: info@technistone.cz , export@technistone.cz
Web site: www.technistone.eu

Phone number in case of emergency: 00420 495 714 711

Manufacturer / Importer in Australia:






Name of the company: NCS HOLDINGS PTY LTD
Residence: 20 HI TECH DRIVE KUNDA PARK QUEENSLAND AUSTRALIA
Telephone number: 07 5445 5183

Australian phone number in case of emergency: 07 5445 5183 OR 000

02 HAZARDS IDENTIFICATION

Final product: wall tiles for cladding of building's construction and outdoor walls (external using).

There is no provision for any risk associated with the finished **Engineered stone Technistone® Exterior** material in the CLP (EC) regulation n^o. 1272/2008. However, during the manufacturing and installation of the material, it is necessary to consider the following information. Please, read carefully. The dust derived from the manufacturing processes, contains respirable crystalline silica (SiO₂). Contents of crystalline silica 70%-90%. When these operations are carried out with water for cooling, lubrication and dust depression, then the quantity of airborne dust is reduced into 90 – 98%.

 STOT RE 1	<p>HAZARD H372: Causes damage to lungs through prolonged or repeated exposure (inhalation)</p> <p>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: Wear respiratory protection for particles (P3).</p> <p>FIRST AID MEASURES P314: Get medical advice/attention if you feel unwell. P501: Dispose of scrap material in accordance with local regulation</p>
 	
 	

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, cristobalite, glass and others, polyester (5-15%), pigments and additives (<5%). Content of crystalline silica 70%-90%.

ISO 9001 certified:



04 FIRST AID MEASURES

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

	<p>Contact with eyes: Keep eyes open and rinse 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.</p>
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05 FIREFIGHTING MEASURES

Engineered stone Technistone® Exterior can be combusted only with difficulty.

Fire-resistant	Category: A2-s1, d0, flame propagation index 0 mm/min
Suitable extinguishing agents	Any suitable agent for surrounding fires. Extinguishers of polyvalent powder are recommended.
Personal Protection Equipment	Depending on the surrounding fire. Keep persons removed and upwind of fire. Wear self-contained breathing apparatus.

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 **Engineered stone Technistone® Exterior**.

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. Avoid strong impacts that may cause the material to break.

08 EXPOSURE CONTROLS/PERSONAL PROTECTION

The user has the responsibility to carry out a risk evaluation of dust exposure according to the local risk prevention law. The limits may be changed from time to time; you are required to follow local safety announcements. Check the PELs (Permissible Exposure Limit) applicable under the regulations of each country where you handle the products.

Respirable dust in Australia:

Country	Restricted hazardous chemical	Restricted use
Australia	Free silica (crystalline silicon dioxide)	For abrasive blasting at a concentration of greater than 1%

Country	Hazardous chemical	Type of health monitoring
Australia	Crystalline silica	Demographic, medical and occupational history. Records of personal exposure. Standardised respiratory questionnaire to be completed. Standardised respiratory function test, for example FEV ₁ , FVC and FEV ₁ / FVC. Chest X-ray full size PA view.

Adopted by

Work Health and Safety Regulation 2011 / National Measurement Act 1960 (Cwlth)

Occupational Exposure Limits in mg/m³ 8 hours TWA

Country	Crystalline Silica	Cristobalite	Tridymite
Australia	0,1	0,1	0,1

Respirable dust in EU 27, Norway & Switzerland:

Occupational Exposure Limits in mg/m³ 8 hours TWA

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	/	/
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 / XVI4	/	/	/	/
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, cristobalite, 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	Adopted by/Law denomination	OEL Name (if specific)
Austria	I	Bundesministerium für Arbeit und Soziales	Maximale ArbeitsplatzKonzentration (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 factories. Regulations of 1981.in	
Czech R	V	Governmental Directive n°441/2004.	
Denmark	VI	Direktoratet for Arbejdstilsynet.	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 ArbeitsplatzKonzentration (MAK)
Greece	XI	Legislation for mining activities.	
Ireland	XII	2002 Code of Practice for the Safety, Health & Welfare at Work (CoP).	
Italy	XIII	Associazione 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 ArbeitsplatzKonzentration (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/ael_database.aspx
Norway	XVIII	Direktoratet for Arbejdstilsynet	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 & Safety Executive	Workplace Exposure Limits

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Respirable dust in United States of America:

Country	Substance	OSHA PEL	ACGIH TLV
United States	Respirable crystalline silica: quartz, cristobalite, and tridymite	Total dust, (30 mg/m ³ / %SiO ₂ +2); Respirable dust (10 mg/m ³ / %SiO ₂ +2) as 8 hour TWAs	0.025 mg/m ³ (8 hr TWA)

Adopted by/Law denomination	OEL Name (if specific)
Occupational Safety & Health Administration (OSHA)	Permissible exposure level (PEL)
American Conference of Governmental Industrial Hygienists (ACGIH)	Threshold limit value (TLV)

Exposure Controls for 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 respirable crystalline silica (SiO₂).

Long term exposure to dust derived from the cutting and manufacturing processes without the use of suitable protection may cause serious diseases 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:

- Machinery and tools involving the use of water.
- 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 programs of the installations to ensure the correct conditions of order, cleaning and operation of work equipment.
- 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 **Engineered stone TechniStone®**.
- Hand Protection. We recommend the use of gloves to avoid the risk of cutting when handling pieces.
- Eye protection. We recommend the use of eye protection in accordance with regulation EN 166:2001.
- Skin protection. Skin protection is not necessary but 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 vacuum cleaning methods.

According to relevant laws and regulations, any material that does meet quality specifications or is rejected can be disposed of in inert waste landfills.

09 PHYSICAL AND CHEMICAL PROPERTIES

Aspect: Solid, according to commercial range.

Color: Commercial range.

Odor: Odorless.

pH: N/A.

Miscibility (in water): N/A.

Water absorption (EN-14617-1): max. 0,06%.

Density (EN-14617-1): min. 2300 kg/m³

Bending stress (EN-14617-2): min. 33 MPa.

Coefficient of thermal expansion (EN-14617-11): max. $30 \times 10^{-6} / ^\circ\text{C}^{-1}$.

Autoignition temperature: N/A.

Fire point: N/A.

10 STABILITY AND REACTIVITY

Conditions to avoid: Avoid strong impacts that may cause the material to break.

Decomposition products: Unknown.

11 TOXICOLOGICAL INFORMATION

Phone number in case of emergency: 00420 495 714 711

During fabrication process dust is generated that could contain respirable crystalline silica (SiO₂). 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.

Anyway there is no provision for any toxicological risk associated with the finished material.

12 ECOLOGICAL INFORMATION

Engineered stone Technistone® Exterior does not contain ecotoxins.

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 non-hazardous waste landfills.

The **Engineered stone Technistone® Exterior** 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

	Air transport
ADR/RID	ICAO/IATA no restricted
TPC/TPF	no restricted

United States

ADR/RID/IMO/ICAO/US DOT	Proper shipping name	Not regulated
	Hazard class	Not regulated
	ID number	Not regulated
	Packaging group	Not regulated

15 REGULATORY INFORMATION

This Safety Data Sheet (MSDS) has been prepared according to CLP Regulation, (EC) No 1272/2008 and according to the Act No. 356/2003 Coll., and Decree of the Czech Ministry of Department and Trade No. 231/2004 Coll.

Labelled according to European EEC directives.

16 OTHER INFORMATION

Check with **Technistone a.s.** 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 materials 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 fabrication published by the manufacturer. Information available (www.technistone.eu)

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. A.St.A. World-Wide is voluntary participating at the NEPSI respirable crystalline silica social dialogue agreement.

This Safety Data Sheet (MSDS) is approved and follows the Agglomerated Stone Association of Europe (A.St.A. World-Wide) standard rules.