

Product safety data sheet of ceramic tiles

Trade name: Dry-pressed ceramic tiles
Version: 1.0 / EN

Printing date: 06/07/2022
Revision date: 28/11/2013

SECTION 1. IDENTIFICATION OF THE PRODUCT AND COMPANY

1.1 Product identifier

Name of the substance:	Glazed and non-glazed ceramic tile
Product type	Inorganic product

Ceramic tiles are articles primarily manufactured from raw materials of mineral origin (mostly clay) that have been mixed with water, dried, formed and fired in kilns at high temperature. They frequently present a glaze layer on its surface which has been fired together with the substrate.

1.2 Identified uses

Ceramic tiles are generally used as building elements, in floor and wall coverings.

Uses advised against:	Not known
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1.3 Details of the supplier of the safety data sheet

Supplier:	Gilberto Rodríguez
Address:	Autopista sur Km 13
Town:	Soacha
Postcode:	27540
Country:	Colombia
Telephone number:	7309400
Fax number:	5750120
E-mail:	gilberto.rodriguez@alfa.com.co

1.4 Emergency assistance:	7309400
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SECCIÓN 2. HAZARDS IDENTIFICATION

2.1 Classification and labeling of the product

Not applicable

2.2 Main aspects

Ceramic tiles are odor-free, stable, non-combustible and do not present an immediate danger to human health or to the environment. During the process of cutting and grinding, or any other process that generates dust, including disposal, the use of respiratory protection, goggles and clothing to prevent excessive exposure to the particles present in the dust may be required. The use of gloves is also recommended to avoid possible cuts and scratches. Wearing safety shoes will prevent possible damage to the feet because of falling parts on them (see point 8.2.2).

2.2.1 Potential acute effects on the health

No acute effects from exposure to intact tile are known

Working with broken or cut tile produces a potential for cuts to the hands and exposed body parts. Acute effects such as eye irritation may occur if associated with high dust operations such as dry cutting tile or during the removal of tile surfaces. In very rare cases, symptoms of acute silicosis (a nodular pulmonary fibrosis associated with

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exposure to respirable crystalline silica), may develop following acute exposure to extremely dusty environments generated from tile dust. Signs such as labored breathing and early fatigue may indicate silicosis; however, these symptoms can arise from many other causes.

2.2.2 Potential chronic effects on the health

No chronic effects are known for exposure to intact tile.

Long-term, continual exposure to respirable crystalline silica at or above allowable occupational exposure limits may lead to the development of silicosis, and is associated with pulmonary tuberculosis, bronchitis, emphysema, and other airway diseases. This type of exposure may also be related to the development of autoimmune disorders, chronic renal disease, and other adverse health effects. Epidemiological studies indicate that silicosis is a risk factor for developing lung cancer. As for acute effects, signs such as labored breathing and early fatigue may indicate silicosis; however, these symptoms can arise from many other causes.

2.2.3 Carcinogen Status

Respirable crystalline silica is classified by the International Agency for Research on Cancer (IARC) as a Group I Carcinogen (carcinogenic to humans). The National Toxicology Program (9th Report) lists respirable crystalline silica as Known to be a Human Carcinogen. USDOL/OSHA and NIOSH have recommended that crystalline silica be considered a potential occupational carcinogen.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Ceramic tiles are obtained by high temperature firing of a series of raw materials mainly from mineral origin resulting in a product that presents no danger as such.

The danger lies in the amount of respirable crystalline silica that dust generated during certain operations may have, such as cutting, grinding or removal. This amount is variable because it depends on the type of tile and on the size of the dust particles generated during such operations. A preliminary study on the grinding-water powder shows a percentage of respirable crystalline silica much lower than 1%.

SECTION 4. FIRST AID MEASURES

Dust inhalation:

Take the affected person outside into the fresh air. Administer artificial respiration if necessary.

Contact with the eyes:

Open the eyes and wash with plenty of clean water.

Ingestion of dust:

This is unlikely to occur. The product is not toxic nor is retained in the intestinal tract.

Contact with the skin:

Wash with soap and water. If the skin is broken, proceed in accordance with the seriousness of the cut.

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Indication of any immediate medical attention and special treatment needed

No special indications

SECTION 5. FIREFIGHTING MEASUREMENTS

Non-combustible. All extinguishing agents are permitted. Adapt measures to the surrounding areas.

SECTION 6. ACCIDENTAL RELEASE MEASURES

These measures are referred to accidental dust liberation

6.1 Personal precautions, protective equipment and emergency procedures

Emergency procedure: See point 8.2.2
Avoid excessive dust creation. Assure proper ventilation of the affected area.

6.2 Environmental precautions

Treat possible discharges and emissions by capturing the solid particles in suspension.

6.3 Methods and material for containment and cleaning up

Carefully collect the material avoiding dust generation. Use suction mechanisms or wet cleaning. Then ventilate and clean up the affected area.

SECTION 7. HANDLING AND STORAGE

7.1 Precautions for safe handling

7.1.1 Protection measures

General measures:

Ensure good ventilation in the work area. It is advisable to use wet methods that reduce or avoid the formation of dust. If release of the substance cannot be avoided, there must be a localized extraction system. Consider the emission limit values for cleaning of extraction gases.

Personal protection: Avoid skin, eye and clothes contact. See point 8.2.2

Fire-prevention measures:

Non-combustible substance. Standard fire-protection arrangements.

Preventive measures for dust and aerosol generation:

Avoid dust production. Avoid spreading dust. The arising dust that cannot be avoided must be regularly collected. Use suction mechanisms. Alternatively, wet cleaning can be used.

Environmental protection measures:

Treat possible discharges and emissions by capturing the solid particles in suspension. Consider the emission limit values for cleaning of extraction gases.

7.1.2 General advise on occupational health:

Do not drink, eat or smoke in work areas.

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Avoid skin contact.
Wash your hands after use.
Avoid eye contact.
Avoid inhaling dust.
Contaminated clothes must be changed and carefully cleaned.
Take off contaminated clothes and protection equipment when you leave the work area.
Ensure there are shower facilities and, if possible, lockers with separate compartments for work clothes and daywear.
Keep the work area clean.

7.2 Conditions for safe storage, including any incompatibilities

Ceramic tiles do not need specific conditions to ensure the safe storage.
Ceramic tiles have no incompatibilities.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Substance	CAS number	OSHA PEL* (mg/m ³)	NIOSH REL* (mg/m ³)	ACGIH TLV** (mg/m ³)
Crystalline silica as quartz (respirable fraction)	14808-60-7	10/(%SiO ₂ +2)	0,05	0.025
Crystalline silica as quartz (total dust)	14808-60-7	30/(%SiO ₂ +2)	N.E.	N.E.

N.E. : Not established

*NIOSH Pocket Guide to Chemical Hazards. <http://www.cdc.gov/niosh/npg/npgd0684.html>

** 2001 Edition, respirable fraction to be determined as per Appendix D of ACGIH TLV

8.2 Exposure controls

8.2.1 Appropriate engineering controls

Ventilation: Use adequate ventilation to keep exposure to dust below recommended exposure levels. Avoid inhalation of dust. The highest probability of silica exposure occurs during dry cutting or removal of installed tile. Wet cutting methods are recommended.

8.2.2 Personal protection

Personal protection equipment should be chosen depending on the dust concentration in each workplace. Where special or unusual uses or conditions exist, it is suggested that the assistance of an industrial hygienist or other qualified professional be sought.

Eye and face protection: Safety glasses with side protection to prevent eye irritation. With powder, use goggles, according to the ANSI specifications.

Hand protection: Wear suitable gloves of leather and/or cotton for handling the product for long periods of time, according to the international standards.

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Skin protection:	Work clothes
Respiratory protection:	Use a properly fitted NIOSH/MSHA approved particulate respirator when cutting tiles or during the removal of tile surfaces
Feet protection:	Use of safety shoes (according to international standards) is while handling of tiles.

Information and training of the workers and their staff and line managers focused on careful hygiene behavior.

8.2.3 Environmental exposure controls

Treat possible discharges and emissions by capturing the solid particles in suspension

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemicals properties

Appearance at 20 °C and 1013 hPa:	
Physical state:	Solid
Colour:	Variable depending on the raw materials and decoration of the tile
Melting/freezing point:	>2010°F substrate; >1650°F glaze
Relative density:	1,7-2,9 g/cm ³
Explosive properties:	Not inflammable

SECTION 10. STABILITY AND REACTIVITY

Ceramic tiles are stable under recommended conditions of use and storage. Avoid dust generation during handling processes.

SECTION 11. TOXICOLOGICAL INFORMATION

Skin: Dust generated can cause skin redness because of its abrasive effect. Cuts by handling cut or broken pieces are possible.

Inhalation: The generated dust can cause difficulties in breathing or irritation of the respiratory tract by its abrasive effect. Exposure to environments with high dust concentration may cause symptoms of acute silicosis associated with the inhalation of respirable crystalline silica.

Eyes: Dust generated can cause eyes redness because of its abrasive effect.

Chronic inhalation. Long-term, continual exposure to respirable crystalline silica at or above allowable occupational exposure limits may lead to the development of silicosis, and are associated with pulmonary tuberculosis, bronchitis, emphysema, and other airway diseases. This type of exposure may also be related to the development of autoimmune disorders, chronic renal disease, and other adverse

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health effects. Epidemiological studies indicate that silicosis is a risk factor for developing lung cancer. Signs such as labored breathing and early fatigue may indicate silicosis; however, these symptoms can arise from many other causes.

SECTION 12. ECOLOGICAL INFORMATION

No adverse effect is known for ceramic tiles on environment.

SECTION 13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Waste should be disposed of in a landfill certified to accept such materials in accordance with federal, state and local regulations.

SECTION 14. TRANSPORT INFORMATION

Non-dangerous goods according to international standards of transport by land, sea and air.

SECTION 15. REGULATORY INFORMATION

The information in this data sheet provides information related to the potential hazards associated with dusts, which may be produced during cutting or otherwise changing the shape of the tile during installation and/or removal.

This tile may contain <1% by weight each of the following elements, which are SARA 313 Recordable: Antimony, Arsenic, Barium, Beryllium, Cadmium, Cobalt, Chromium, Copper, Manganese, Mercury, Nickel, Lead, Silver, Thallium, Tin, Titanium, Vanadium, and Zinc.

This product or any of its components meets the following hazard definition(s) as defined by the Occupational Safety and Health Hazard Communication Standard (29 CFR Section 1910.1200): Health Hazard (Sections 3 and 11)

Title 22 Division 2, California Code of Regulation Chapter 3 (Proposition 65): This product contains a chemical or chemicals known to the State of California to cause cancer and/or birth defects or other reproductive harm.

16. OTHER INFORMATION

Hazardous Material Identification System:

HMS: Health: 0 Fire: 0 Reactivity: 0

National Fire Protection Association:

NFPA: Health: 0 Fire: 0 Reactivity: 0

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The information detailed in this safety data sheet is based on our knowledge at the date stated; it refers exclusively to the product indicated and does not constitute a guarantee of particular qualities.

It is the user's responsibility to use the product in accordance with the recommendations in this safety data sheet.