

MARAZZI GROUP

Safety Data Sheet CERAMIC TILES

Rev.12 date: 02 March 2024

Printing date: 05 March 2024

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1. IDENTIFICATION OF PRODUCT AND COMPANY

- 1.1 Product name: Dry-pressed ceramic tiles - brand MARAZZI, RAGNO
1.2 Use: Floor and wall coverings
1.3 Company name: MARAZZI GROUP S.r.l. a socio unico
Address: Via Regina Pacis, 39 – 41049 Sassuolo (MO) Italy
Telephone: +39 0536 860800
Fax: +39 0536 860644
e-mail: ambiente@marazzigroup.com
1.4 Company's emergency telephone number:
+39 0536 860800 Reference Health, Safety and Environment Manager

2. HAZARDS IDENTIFICATION

- 2.1 Hazard classification as required by dir. CE 1272/2008:
not classified
- 2.2 Labelling as required by dir. CE 1272/2008:
not subject to hazard labelling
- 2.3 Other hazards:
The finished product is odorless, non-flammable, do not release hazardous materials after installation, and pose no immediate hazard to health and environment.
Hazard components as required by dir. 67/548/CE and reg. 1272/2008/CE or with occupational exposure limits are associated only to airborne particulates present into the dust produced by dry-cutting product during installation or by any other operations, including demolition/removal projects.
Hazard Statements:
H350 May cause cancer (inhalation)
H335 May cause respiratory irritation
H372 Causes damage to organs (lung/respiratory) through prolonged or repeated exposure (inhalation)

3. COMPOSITION / INFORMATION ABOUT COMPONENTS

- 3.1 Substances:
N.A.
- 3.2 Mixtures:
Mixture of natural mineral substances and inorganic pigments.
Ceramic tiles are no hazardous-material fired at very high temperature (> 1200°C - > 2190°F) consisting of a ceramic support and an optional glaze decoration. The ceramic support is composed by: clay, feldspars, quartz feldspar sands and inorganic pigments. The glaze, if occurring, is composed by frits, pigments and other substances as silica, oxydes, carbonates, in variable percentage depending on the different surface (matt, glossy...) and different colours and chromatic effects. These products do not contain asbestos.



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| Composition | CAS number | Estimated % by Wt/Wt |
|------------------------------|------------|----------------------|
| Silica amorphous | 7631-86-9 | 60 - 75 |
| Crystalline silica as QUARTZ | 14808-60-7 | 15 - 30 |
| Mullite | 1302-93-8 | 3 - 11 |
| Plagioclase (Feldspar) | 68476-25-5 | 1.5 - 7 |
| K-Feldspar | 68476-25-5 | 0 - 1.5 |
| Corundum | 1302-74-5 | 0 - 2.5 |
| Zirconium Silicate | 10101-52-7 | 0 - 3 |

4. FIRST AID MEASURES

4.1 Description of first aid measures:

Ceramic tiles pose no health hazards as packaged. During installation and while dry-cutting the tiles the following possible health effects could occur if Personal Protective Equipments (PPE) are not worn properly:

| | |
|------------|---|
| EYES | Dust and small shards of tile could cause eye irritation and possible eye injury. Rinse eyes with clean water for at least 15 minutes. If irritation persists seek medical attention. |
| SKIN | Dust and sharp edges generated during installation could cause irritation and lacerations. Wash hands thoroughly with soap and water after handling, dressing the wound. In case of serious injury or persistent irritation seek medical attention. |
| INHALATION | Inhalation of dust generated during installation could cause upper respiratory tract irritation and in rare cases allergic/asthmatic reactions. Move the affected person from exposure area, to fresh air. If irritation persists seek medical attention. |
| INGESTION | Ingestion of small amounts of dust should not cause harmful effects. Larger pieces could damage the intestinal tract. Seek medical attention if nausea develops. |

4.2. Most important symptoms and effects, both acute and delayed:

Some skin irritation may occur from contact with the powder resulting from dry- cutting operations.

During the floor installation process, dry-cutting stage may produce respirable crystalline silica. Prolonged and/or large-scale inhalation of respirable crystalline silica dust may cause pulmonary fibrosis, commonly known as silicosis. The main symptoms of silicosis are coughing and shortness of breath. Occupational exposure to respirable crystalline silica dust must be monitored and controlled.

4.3. Indication of any immediate medical attention and special treatment needed:

In case of accident or if you feel unwell, seek medical advice immediately (show user's guide or safety data sheet if possible). In case of persistent adverse effects consult a doctor showing this safety data sheet.

Treatment: None.



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5. FIRE - FIGHTING MEASURES

Ceramic tiles are incombustible under normal circumstance

| | |
|----------------------------|------|
| Flash point (Method Used): | N.A. |
| Flammable limits: | N.A. |
| Autoignition Temperature: | N.A. |

5.1. Recommended extinguishers:

None specific for ceramic tiles. Use extinguishers according to other materials involved in the fire.

5.2. Risks arising from combustion:

None.

5.3. Personal protection equipment:

None specific for ceramic tiles. Follow the provided measures for the other materials involved in the fire.

6. MEASURES IN CASE OF ACCIDENTAL SPILLING

Ceramic tiles are solid materials and do not involve spilling. Pieces falling from damaged packages during transport or laying are inert materials, whether entire or broken.

Avoid creating excessive dust during cutting activities. Clean up dust with a vacuum system with a High-efficiency particulate (HEPA) air filter vacuum or damp sweeping. See Section 8 of this SDS concerning PPE (Personal Protective Equipments) information for clean-up.

7. HANDLING AND STORAGE

7.1 Safety handling:

If possible use mechanical transport devices to avoid the manual transport. No more than one package should be transferred by hand at a time to prevent personal injury.

When cutting, grinding or removing, use equipment with integral dust collection and/or use local exhaust ventilation. Use wet cutting methods to reduce generation of dust. Use respiratory protection in the absence of effective engineering controls.

7.2 Safety storage, including any incompatibilities:

When storing on shelves or racks the weight of the tiles should be taken into account to prevent the overloading of the shelf unit.

Shelf life is unlimited.

7.3. Specific end use:

None



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8. EXPOSURE CONTROL AND PERSONAL PROTECTION

Ceramic tiles are inert materials and studies have demonstrated that there is no danger of chemical substances or radioactivity release. Installation and dry-cutting the tiles may cause risks to personal safety.

8.1 Occupational exposure limit values of components (ACGH), consult national regulations if any:

Total dust (TLV/TWA)

TLV TWA - 10 mg/m³

TLV STEL - n.d.

Dust – respirable fraction (TLV-TWA)

TLV TWA - 3 mg/m³

TLV STEL - n.d.

Crystalline Silica as QUARTZ – respirable fraction:

TLV TWA - 0.1 mg/m³

TLV STEL - n.d.

8.2 Exposure controls:

Engineering controls: minimize the generation of dust dispersed through local exhaust ventilation when cutting and installing tiles. Remove and wash contaminated clothing. Occupational exposure to crystalline silica dust should be monitored and controlled

Wet cutting methods are recommended.

Personal Protective Equipments (PPE):

| | |
|-------------------|---|
| EYES | Not required for normal use. Use dust-proof goggles or safety glasses with side shields. Contact lenses may absorb irritants. Do not wear contact lenses in work areas. |
| SKIN | When cutting this product, cotton or leather work gloves should be worn to minimize skin exposure to dust and/or cuts. Wash hands prior to eating, drinking, or smoking and at the end of the work shift, after cutting operations are conducted. |
| RESPIRATORY TRACT | A dust mask should be worn when dry cutting tiles, in compliance with national legislation. Use of proper PPE it is still always recommended during tiles cutting, grinding and removing stages |
| OTHER HAZARDS | Wear safety shoes during transport and handling tiles to avoid injuries (crushing due to falling material). |

9. CHEMICAL AND PHYSICAL PROPERTIES

| | |
|--|-------------------------------|
| Appearance and colour: | Brittle solid, color may vary |
| Odour: | Odourless |
| Melting point/freezing point: | N.A. (> 2200°F - >1200°C) |
| Initial boiling point and boiling range: | N.A. |
| Flammability (solid/gas): | Not flammable |
| Upper/lower flammability or explosive limit: | N.A. |
| Vapour density: | N.A. |
| Flash point: | N.A. |
| Evaporation rate: | N.A. |



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| | |
|--|------------------------------------|
| Vapour pressure: | N.A. |
| Solubility in water: | Insoluble |
| Specific Gravity (H ₂ O = 1): | > 2 |
| Solubility in oil: | N.A. |
| Partition coefficient n-octanol/water: | N.A. |
| Auto-ignition temperature: | Not self-inflammatory |
| Decomposition temperature: | N.A. |
| Viscosity: | N.A. |
| Explosive properties: | N.A. |
| Oxidising properties: | N.A. |
| Volatility: | 0 g/L Volatil Organic Comp. (VOCs) |

10. STABILITY AND REACTIVITY

Ceramic tiles are stable under normal conditions of use and don't react dangerously with most solvents, acids, or caustics.

| | |
|-----------------------------------|-----------------------------|
| Reactivity: | Inert |
| Chemical stability: | Stable in normal conditions |
| Conditions to avoid: | None in particular |
| Physycal Stability: | Stable in normal conditions |
| Incompatible materials | None in particular |
| Hazardous decomposition products: | None in particular |
| Hazardous Polymerization: | None |

11. TOXICOLOGICAL INFORMATION

No toxicological effects are associated with intact ceramic tiles. The following data refer to the RESPIRABLE CRYSTALLINE SILICA that is generated during cutting and demolition activities:

| | |
|--|--|
| acute toxicity | Data are missing or insufficient |
| skin corrosion / irritation | Missing or insufficient |
| eye Injury / irritation: | Missing or insufficient |
| sensitization of skin or respiratory tract: | Missing or insufficient |
| mutagenicity: | Missing or insufficient |
| carcinogenicity: | CATEGORY 1A |
| toxicity for reproduction: | Missing or insufficient |
| specific target organ toxicity (STOT) — single exposure: | CATEGORY 3 Respiratory tract irritation |
| specific target organ toxicity (STOT) — repeated exposure: | CATEGORY 1A respiratory effects (pulmonary fibrosis, silicosis) |
| inhalation hazard: | Missing or insufficient |
| Effects on health: | |



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The repeated and prolonged inhalation of fine dust of crystalline silica at or above allowable occupational exposure limits may lead to the development of silicosis (a nodular pulmonary fibrosis), 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 health effects.

Recent epidemiologic studies demonstrate that workers exposed to elevated silica concentrations have a significant risk of developing chronic silicosis. Signs such as labored breathing and early fatigue may indicate silicosis; however, these symptoms can arise from many other causes.

Silicosis may be complicated by severe mycobacterial or fungal infections and result in tuberculosis (TB). Epidemiologic studies have established that silicosis is a risk factor for developing TB. Any existing respiratory or pulmonary diseases may be complicated by exposure to respirable crystalline silica. Smoking may increase the risk of adverse effects if done in conjunction with occupational exposure to.

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.

Short term experimental studies of rats have found that intratracheal instillation of quartz particles leads to the formation of discrete silicotic nodules in rats, mice and hamsters.

Oral (silica) Lethality

LD50 Rat oral >22,500 mg/kg

LD50 Mouse oral >15,000 mg/kg

LC50 Carp >10,000 mg/l (per 72 hr)

12. ENVIRONMENTAL INFORMATION

Data about the environmental impact of ceramic tiles are not available. However no environmental risk or transformations caused by ceramic tiles in air, water and / or soil may be expected because of their inert nature.

| | |
|--------------------------------|--|
| Toxicity: | Adopt good working practices and do not discharge the product into the environment |
| Persistence and degradability: | N.A. |
| Bio accumulative potential: | N.A. |
| Mobility in soil: | N.A. |
| PBT and vPvB: | N.A. |
| Other adverse effects: | None |

13. DISPOSAL CONSIDERATIONS

Avoid release to the environment scrap of ceramic tiles from installation, handling and at life-cycle ending. Scrap ceramic tiles are not hazardous wastes so no particular techniques of recovering or treatment are required. Scrap ceramic tiles and their packaging (paper and cardboard - plastic - wood – undifferentiated) should be disposed of in accordance with applicable national and local regulations.



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14. TRANSPORT INFORMATION

| | |
|---|--|
| UN number: | Not dangerous goods according to transport regulations |
| UN shipping name: | N.A. |
| Danger classes related to transport: | N.A. |
| Packaging group: | N.A. |
| Dangers for the environment | |
| ADR-Environmental pollutant: | No |
| IMDG-Marine pollutant: | No |
| Special precautions for users: | N.A. |
| Transport in bulk according to Annex II of MARPOL and the IBC Code: | N.A. |

15. REGULATORY INFORMATION

15.1. Specific rules on health, safety and environment related to the product:

Regulation (EU) n. 1907/2006 (REACH):

- SVHC art. 57 (Candidate List): N.A.
- Authorization (Annex XIV): N.A.
- Restrictions (Annex XVII): N.A.

Regulation (EU) n. 1272/2008 (CLP): N.A.

Dir 2012/18/EU – control of major-accident hazards (SEVESO): N.A.

15.2. Chemical safety assessment: N.A.

16. OTHER INFORMATIONS

This document has been prepared in accordance with the Occupational Safety and Health Administration (OSHA) Hazard Communication standard, 29 Code of Federal Regulations (CFR) 1910.1200(g), Safety Data Sheets.

According with REACH (Registration, Evaluation, Authorisation and Restriction of Chemicals – EU Regulation 18/12/2006), ceramic tiles are classified as “ARTICLE: object with physical properties more important to its function than any chemical properties” so that, a SDS is not required/mandatory. Nevertheless, this SDS also complies with CLP Regulation EC1272/2008 (CLP).

This SDS has been prepared with the best knowledge and based on the information sources currently available. This data sheet replaces and cancels any previous version. Users' attention is also drawn to the possible risks connected to a use of the product other than that for which it was designed.

Abbreviations and Acronyms:

N.A.: not applicable - not available

LD50: Lethal dose for 50 percent of the test population.

LC50: Lethal concentration for 50 percent of the test population.



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TLV: Threshold limit value.

TWA: Time weighted average

STEL: Short-term exposure limit.

STOT: Organ-specific toxicity

Complete text about hazard statement in section 2:

(H350) May cause cancer (inhalation)

(H335) May cause respiratory irritation

(H372) Causes damage to organs (lung/respiratory) through prolonged or repeated exposure (inhalation)



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