

Safety Data Sheet

(according to 91/155/EEC)

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Date last revision: 25-03-2008
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Product: ceramic floor tiles (unglazed)

1. Identification of the substance/preparation and of the company/undertaking

Information on product

Product name: ceramic floor tiles (unglazed)
Application: floor covering, decoration

Information producer

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2. Hazard identification

This product is not classified as hazardous according to the Directive 1999/45/EC. During the firing process a very stable chemical crystal grid structure is formed. Tiles therefore are not considered as hazardous to health. However, during activities like drilling, sawing and grinding of tiles dust is generated containing crystalline silica. Inhalation of this type of dust is hazardous to health and should be avoided.

3. Composition/information on ingredients

Tiles consist of a mixture of predominantly clay types and other naturally occurring mineral substances. After milling and mixing with water, granulation in spray dryers and pressing, the tiles were fired at very high temperatures. During the firing process very stable crystal grid structures are formed in which the individual chemical elements are incorporated.

Main constituents of ceramic floor tiles are silicon oxide (60-70 %) and aluminium oxide (15-25 %); the following substances occur in smaller percentages (< 10 %): sodium oxide, calcium oxide, manganese oxide, iron oxide, potassium oxide, titanium oxide, magnesium oxide, potassium oxide and other oxides of heavy metals.

4. First aid measures

General: this section only applies to the handling of tiles (drilling, cutting, sawing, grinding, removal, etc.)

Eye contact: if dust gets in the eyes, immediately flush with large amounts of water for at least 15 minutes. Call for medical attention if irritation persists.

Inhalation: in the event of respiratory complaints (irritation, coughing, tightness of chest, etc.), provide for fresh air (outside). Call for medical attention if complaints persist.

Skin contact: no specific measures.

Ingestion: no specific measures.

5. Fire-fighting measures

Fire extinguishing media: not applicable.

Fire extinguishing media not to be used: not applicable.

Specific exposure hazards due to the substance, preparation, combustion products or release of gases: not applicable.

Specific protective clothing for fire fighters: not applicable.



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6. Accidental release measures

In the event of generation of large amounts of dust during processing: provide adequate ventilation; wear a respirator (type P3); clean up dust using an industrial vacuum or by damp sweeping; refer to section 8.

7. Handling and storage

Handling: no specific measures.

Storage: no specific measures.

8. Exposure controls/personal protection

During occupational processing of tiles (drilling, sawing, grinding of tiles; removal of old tile layers) large amounts of dust can be generated. This dust contains silica.

Substance	Occupational exposure limit:	Remarks:
crystalline silica	0,075 mg/m ³	respirable dust; legally binding OEL.

Control of occupational exposure:

Technical measures:

Bring tiles down to size using cutting instead of sawing or grinding methods.

During sawing or grinding of tiles or removal of old tiles use local exhaust ventilation combined with collection of dust; wet sawing or grinding methods are to be preferred (sawing and grinding equipment with water supply; application of (semi) automatic removal equipment with moistening facility).

Ventilation:

Provide adequate ventilation; perform activities outside as much as possible.

Respiratory protection:

Always use respiratory protection during sawing or grinding, in combination with local exhaust ventilation. A type P3 filtering piece is sufficient.

When not applying local exhaust ventilation or wet sawing or grinding methods, a (half or full mask) respirator with motor/filterunit (type TM3P) should be used. This is also recommended during removal of old tiles.

Eye protection:

Wear safety glasses with side shields or a face shield when sawing or grinding tiles or removing old tiles. Avoid wearing contact lenses.

Skin protection:

Wear cotton or leather working gloves during processing of tiles.

Hygiene:

Wash hands before eating, drinking or smoking or at the end of the shift.

9. Physical and chemical properties

Appearance: solid

Odour: odourless

Colour: may vary

Boiling point/range: not applicable

Flashpoint: not applicable

Auto ignition temperature: not applicable

Vapour pressure: not applicable

Solubility in water: not soluble

Explosive limits (LEL/UEL): not applicable

Viscosity: not applicable



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10. Stability and reactivity

Conditions to avoid: contact with strong basic compounds.

Materials to avoid: contact with strong basic compounds.

Hazardous decomposition products: none.

11. Toxicological information

Exposure will only occur during processing of tiles (sawing, drilling, cutting, grinding; removal of old tiles) and concerns exposure due to inhalation of dust (specifically crystalline silica) and of the eyes and skin.

Acute effects:

Eye irritation due to exposure to high dust concentrations.

Skin irritation due to mechanical abrasion.

Although cases of development of acute silicosis due to short time exposure to very high concentrations of crystalline silica are described in literature, occurrence of this type of disease is very rare.

Chronic effects:

Long term inhalatory exposure to crystalline silica above current occupational exposure limits may lead to silicosis (development of fibrotic nodules in lung tissue) and is also associated with a number of other diseases (bronchitis, emphysema, etc.). Smoking may increase the risk on adverse effects.

Carcinogenicity:

Crystalline silica is classified as a human carcinogen (Group I) by the IARC (International Agency for Research on Cancer).

12. Ecological information

Ecotoxicity: not known.

Mobility in the environment: Immission tests show the immission of metals and sulphate to be less than 5 % of the maximum allowable immission.

Persistence in the environment and degradation: not biologically degradable.

Possible bioaccumulation: not applicable.

Other adverse effects: not known.

13. Disposal considerations

Product should be disposed of in accordance with national and local regulations.
Refer to section 8 for preventive measures in the event of dust generation during disposal and dumping.

14. Transport information

Classification: This product is not classified as hazardous according to RID, ADR, ADNR, IMDG, IATA-DGR regulations.

Labelling: none.

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15. Regulatory information

Labelling according to EC-Directives: This product is not classified and not subject to labelling according to Directive 199945/EC.

16. Other information

When installing or processing tiles please take note of the following additional safety measures:

- Wear adequate working clothes
- Wear knee protection
- Wear safety shoes
- Use appropriate lifting and transporting equipment

The information and data in this Safety Data Sheet are based on current scientific and technical state of the art and are believed to be accurate at the printing date.

The information refers solely to the product indicated and constitutes no guarantee of particular quality.

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This MSDS cancels and replaces any preceding release.