

MANUFACTURER'S INFORMATION AND RECOMMENDATIONS

I. TYPES OF TILES IN THE COMMERCIAL OFFER

Glazed wall ceramic tiles manufactured according to the state-of-the-art monoporous technology (single firing), in compliance with the PN-EN 14411 standard, Annex L, group BIII (water absorption $E > 10\%$). The tiles are intended for lining walls inside buildings at a temperature above 0°C (not frost resistant).

Wall moldings and decors manufactured in compliance with the PN-EN14411 standard, Annex L, group BIII (water absorption $E > 10\%$) in the multiple firing technology. The tiles are intended for lining walls inside buildings at a temperature above 0°C .

For tiles, moldings and wall veneers, protuberances of the facing surface are allowed up to 0.5% in relation to the diagonal length calculated from the working dimensions (center curvature), and up to 0.5% in relation to the respective working dimension (side curvature).

The working size of the tiles and decorations is equal to the nominal size and in compliance with the PN-EN 14411 standard, the deviation from the dimensions may not exceed $\pm 0.5\%$ of the side length.

Wall tile decorations (moldings, veneers) may differ in shade and size from the base tiles.

Decorative motifs on the moldings and veneers can be susceptible to abrasion e.g. with joints; therefore, it is recommended to secure the decorations with tape before tiling and grouting. Do not use abrasive cleaning agents for cleaning.

Glazed Gres Porcellanato tiles, frost-resistant, manufactured according to the state-of-the-art single firing technology, in compliance with the PN-EN 14411 standard, Annex L, group BIII (water absorption $E \leq 0.5\%$). The tiles are intended for indoor and outdoor use in residential and public buildings, including health care facilities and industrial plants. They are characterized by low water absorption, high resistance to bending and abrasion, in compliance with the declared class of abrasion. They are easy to clean and resistant to chemical agents. They cannot be used where people walk in footwear with untypical soles (with metal finishes or hobnailed).

Classification of glazed tiles according to their abrasion resistance

When choosing floor tiles, consider the type of shoes, type of movement, as well as cleaning methods and proper protection against abrasive particles.

Doormats should be used in the entrances to buildings to protect the linings against abrasive material.

Tiles should have an abrasion class that is appropriate to the mechanical impact to which they will be subjected in a given room.

The declared class of abrasion (PEI) marked with Arabic numerals is provided on every cardboard box of floor tiles.

Below are the general characteristics and application of selected classes:

Class 2 - for use on surfaces not exposed to abrasive materials. Use soft-soled footwear or walk barefoot. They can be used in bathrooms, bedrooms, living rooms, where there is little traffic.

Class 3 - for use on surfaces exposed to accidental slight abrasive particles. Footwear with normal soles can be worn. It is recommended to use indoors with moderate traffic, e.g. kitchens, halls, corridors, terraces in residential buildings. Do not wear untypical footwear, such as hobnailed shoes.

Class 4 - for use on surfaces where normal traffic with abrasive materials takes place. They can be used in commercial premises, hotels, showrooms, etc.

Class 5 - for use on surfaces exposed to increased continuous traffic carrying in particles of abrasive material. Corresponds to more stringent conditions for the use of glazed tiles, for example, to cover the surfaces of floors exposed to increased, continuous pedestrian traffic carrying in particles of abrasive materials. They meet more demanding conditions, e.g. in department stores, shops, hotel lobbies, etc.

In extreme cases, in very heavy traffic carrying in a lot of abrasive material, it should be considered to use group I glazed tiles.

Shades of ceramic tiles

Within various production batches, both in the case of wall and floor tiles, there may be differences in the color intensity of individual prints, patterns on tiles, causing a change in the color of the entire pattern in relation to the adopted pattern. The shades of the tiles are marked on the cardboard boxes with letters e.g. "A", "B" etc. The shades that are closest to the reference colors are not described on the boxes.

II. LAYING AND JOINING TILES

Laying tiles is best entrusted to companies specializing in this area.

Transport and storage

1. The tiles should be transported by means of transport where they are placed in load units tightly in one layer or on pallets always in an upright position; free spaces should be secured, possibly fastened with straps, preventing the load from moving during transport.
2. Tiles should be stored in places that provide protection against moisture and wetting. Defects caused by improper storage cannot be the basis for a complaint.

Before laying

Before installing the tiles, check the entire batch paying special attention to the quality of the face, shade, and size. They should be checked by comparing tiles from different boxes. Before laying, you should also check the purchased packaging for compatibility of the caliber, shade, and production dates. After laying the tiles, complaints regarding these items will not be considered. **The tiles should be used for their intended purpose.**

Preparation of the surface


1. The surface must be even, sound and compact, if there is any loosening during tapping - "deaf noises", they must be hacked off and laid again. The surface should be cleaned of all dirt, paint, dust and grease residues.
2. In the case of surfaces covered with e.g. wallpaper, a coating of oil and emulsion paints, they should be removed mechanically, and any irregularities should be leveled with leveling mortars. Make larger vertical and horizontal cuts on larger surfaces to reduce the stress that occurs during bonding.
3. The surface should be primed with priming emulsions. This is particularly required for the following surfaces: gypsum, aerated concrete, "suporex" blocks.
4. Before laying tiles, prime the screeds and level them with self-leveling mortars.
5. **A poorly prepared surface is the most common cause of loosening, damage and hairline cracks in enamel.**

Tiling

1. The mortar should be prepared strictly according to the manufacturer's instructions, using a low-speed drill with a mixer and used before the specified date of expiry. Apply the mortar on the wall using a notched trowel with a tooth size adapted to the size of the tiles, possibly in one direction.
2. Spread the mortar on an area of not more than 1 m² at a time. Tiles can be laid as long as the mortar sticks to your hands, the excess mortar should be discarded (do not mix it with the one in the bucket). The adhesive thickness, unless its manufacturer recommends otherwise, cannot exceed 5 mm.
3. The use of spacer crosses is not necessary, but it helps to maintain the width of the joints.
4. In the case of floor tiles, you can tap the tile with a rubber hammer. The position of the plate can be corrected immediately after its position.
5. Make expansion joints or use backing strip at the edges, corners, and joints with the floor.
6. Avoid filling joints with adhesive mortar. Before the adhesive hardens between the tiles, remove excess mortar and distance crosses.
7. On terraces, balconies, stairs and where tiles are exposed to moisture and frost, expansion and drainage systems should be used, preventing moisture accumulation.
8. Before laying tiles on a heated surface, it is recommended to turn on the underfloor heating and gradually increase its temperature to the maximum, then turn off the heating 24 hours before starting work. The heating may be switched on again at the earliest 28 days after the lining has been laid.
9. In any case, the adhesive manufacturer's instructions should be strictly followed. When working on a given surface, use products of the same manufacturer.

Grouting

1. Grouting should begin after the time specified in the instructions for the material used for fixing the tiles.
2. Before grouting, check that the pigment contained in the joint does not soil the surface of the tiles permanently.
3. The joint should be applied with a rubber trowel, pressing the mortar into the spaces between the tiles (first perpendicular to the edge, then diagonally).
4. After drying, clean the tiles with a frequently rinsed and drained sponge. It is important to remember to grout the surface once, not larger than the surface we can clean.
5. At high temperatures and low humidity, it is recommended to lightly moisten the joints with a smooth sponge to prevent them from drying out too quickly.
6. Remove the dried coating with a soft, dry cloth.
7. In any case, the grout manufacturer's instructions should be strictly followed.



It is recommended to use adhesives, mortars, and grouts, which have Certificates of the Building Research Institute, attestations and guarantees issued by manufacturers. When laying tiles, follow the recommendations contained in the guides in the field of construction and specialist literature and follow the guidelines of the Institute of Building Technology contained in the technical conditions of execution and acceptance of construction works issued by the manufacturer.

Good tips

1. A properly prepared surface will protect the tiles from damage.
2. Prime absorbent substrates with a priming emulsion.
3. Do not level the walls with adhesive.
4. Use a suitable notched trowel to apply the adhesive to the wall.
5. After applying the adhesive to the wall, its adhesive properties should be monitored.
6. Mortars should not be mixed with other materials.
7. The maximum adhesive thickness cannot exceed 5 mm, unless the manufacturer allows it.
8. Begin grouting two days after laying the tiles.