

















COLOURED BODY PORCELAIN TILES - RECTIFIED MONOCALIBER



60x60 cm 24"x24" ± 10 mm  
30x60 cm 12"x24" ± 10 mm



This tiles complies recommended standard specifications for ceramics tiles ANSI A.137.1.  
Dry-pressed ceramic tiles with low water absorption (Eb ≤ 0,5%) Group BIa, ISO 13006:2012 (EN 14411:2012) annex G UGL

|   | Technical features   | Test Method      | Requirements for nominal size N  |  |   | IMPERO  |                          |                    |
|---|--|------------------|--|--|---|---|--------------------------|--------------------|
|   |  |                  | 7 cm ≤ N < 15 cm   | N ≥ 15 cm  |   | MATT  | POLISHED                 |                    |
|   |  |                  | (mm)   | (%)  | (mm)  |   |                          |                    |
| REGULARITY CHARACTERISTICS              |  Length and width   | ISO 10545-2      | ± 0,9 (*)  | ± 0,6 (*)  | ± 2,0 (*)                                     | ± 0,2%<br>± 0,8 mm                            | ± 0,2%<br>± 0,8 mm       |                    |
|   |  |                  | Thickness  | ± 0,5 (**)   | ± 5 (**)                                      | ± 0,5 (**)                                    | ± 5,0%<br>± 0,5 mm       | ± 5,0%<br>± 0,5 mm |
|   |  |                  | Straightness of sides  | ± 0,75 (***)   | ± 0,5 (***)                                   | ± 1,5 (***)                                   | ± 0,2%<br>± 0,8 mm       | ± 0,2%<br>± 0,8 mm |
|   |  |                  | Rectangularity   | ± 0,75 (****)  | ± 0,5 (****)                                  | ± 2,0 (****)                                  | ± 0,3%<br>± 1,3 mm       | ± 0,3%<br>± 1,3 mm |
|   |  Surface flatness   |                  | c.c. ± 0,75  | c.c. ± 0,5   | c.c. ± 2,0                                    | ± 0,3%<br>± 1,3 mm                            | ± 0,3%<br>± 1,3 mm       |                    |
|   |  |                  | e.c. ± 0,75  | e.c. ± 0,5   | e.c. ± 2,0                                    |   |                          |                    |
|   |  |                  | EN 14411 annex G (Group BIa)   | ISO 13006 annex G (Group BIa)                          |   |   |                          |                    |
| STRUCTURAL CHARACTERISTICS              |  Water absorption   | ISO 10545-3      | Eb ≤ 0,5% Individual Maximum 0,6%  |  | ≤ 0,1 %                                       | ≤ 0,1 %                                       |                          |                    |
|   |  | ASTM C373        | Requirement ANSI A137.1 Water Absorption Max ≤ 0,5%  |  | ≤ 0,5 %                                       | ≤ 0,5 %                                       |                          |                    |
| BULK MECHANICAL CHARACTERISTICS         |  Breaking strength   | ISO 10545-4      | S ≥ 1300 N   |  | S ≥ 2000 N                                    | S ≥ 2000 N                                    |                          |                    |
|   |  |                  |  Modulus of rupture       | R ≥ 35 N/mm <sup>2</sup>                               |   | R ≥ 40 N/mm <sup>2</sup>                      | R ≥ 40 N/mm <sup>2</sup> |                    |
|   |  Impact resistance, as coefficient of restitution               |                  |  | ISO 10545-5  | Declared value                                | Test method available                         | ≥ 0,55                   | ≥ 0,55             |
| SURFACE MECHANICAL CHARACTERISTICS      |  Mohs hardness  | EN 101(1)        | ≥ 6 (UGL)  |  | Suitable for                                  | 5   |                          |                    |
|   |  Resistance to deep abrasion of unglazed tiles (removed volume) | ISO 10545-6      | ≤ 175 mm <sup>3</sup>  |  | ≤ 150 mm <sup>3</sup>                         | ≤ 150 mm <sup>3</sup>                         |                          |                    |
| THERMAL AND HYGROMETRIC CHARACTERISTICS |  Coefficient of thermal linear expansion                        | ISO 10545-8      | Declared value   | Test method available                                  | ≤ 7 MK <sup>-1</sup>                          | ≤ 7 MK <sup>-1</sup>                          |                          |                    |
|   |  |                  |  Thermal shock resistance | Pass according to ISO 10545-1                          | Test method available                         | Resistant                                     | Resistant                |                    |
|   |  Moisture expansion (in mm/m)                                   |                  |  | ISO 10545-10   | Declared value                                | Test method available                         | ≤ 0,01% (0,1mm/m)        | ≤ 0,01% (0,1mm/m)  |
|   |  |                  |  Frost resistance         | ISO 10545-12   | Pass according to ISO 10545-1                 | Test method available                         | Resistant                | Resistant          |
| PHYSICAL PROPERTIES                     |  Bond strength/adhesion for improved cementitious adhesives     | EN 1348          | Declared value   | -  | ≥ 1,0 N/mm <sup>2</sup> (Class C2 - EN 12004) | ≥ 1,0 N/mm <sup>2</sup> (Class C2 - EN 12004) |                          |                    |
|   |  | -                | Class A1 or A1 <sub>II</sub>   | -  | A1 - A1 <sub>II</sub>                         | A1 - A1 <sub>II</sub>                         |                          |                    |
| CHEMICAL CHARACTERISTICS                |  Resistance to household chemicals and swimming pool salts      | ISO 10545-13     | Minimum Class B (UB for unglazed tiles)  |  | UA  | UA  |                          |                    |
|   |  |                  | Resistance to low concentrations of acids and alkalis  | Declared Class   | Test method available                         | ULA   | ULB                      |                    |
|   |  |                  |  | Resistance to high concentrations of acids and alkalis | Declared Class                                | Test method available                         | UHA                      | -                  |
|   |  Resistance to staining   | ISO 10545-14     | Minimum Class 3  |  | 5   | 5   |                          |                    |
| SAFETY CHARACTERISTICS                  |  Dynamic coefficient of friction (DCOF)                         | ANSI A137.1-2012 | ANSI A.137.1 Requires a minimum value of 0.42 for commercial areas that are likely to be wet.                |  | > 0,42 Wet                                    | < 0,42 Wet                                    |                          |                    |
|   |  | ASTM C1028-2007  | The Ceramic Tiles Institute identifies Tile Slip Resistant when SCOF ≥ 0,60                                  |  | ≥ 0,60 Dry<br>≥ 0,60 Wet                      | ≥ 0,60 Dry<br>0,50÷0,60 Wet                   |                          |                    |

(\*) The permissible deviation, in % or mm, of the average size for each tile (2 or 4 sides) from work size (W).  
 (\*\*) The permissible deviation, in % or mm, of the average thickness for each tile from the work size thickness (W).  
 (\*\*\*) The maximum permissible deviation from straightness, in % or mm, related to the corresponding work sizes (W).  
 (\*\*\*\*) The maximum permissible deviation from rectangularity, in % or mm, related to the corresponding work sizes (W).  
 c.c. The maximum permissible deviation from centre curvature, in % or mm, related to diagonal calculated from the work sizes (W).  
 e.c. The maximum permissible deviation from edge curvature, in % or mm, related to the corresponding work sizes (W).  
 w. The maximum permissible deviation from warpage, in % or mm, related to diagonal calculated from the work sizes (W).  
 (1). Requirements european standard EN 176.