



| Formatos Sizes | 120x278 cm 47 1/4"x109 1/2" ± 6mm | 120x240 cm 47 1/4"x94 1/2" ± 9mm | 75x150 cm 29 1/2"x59" ± 9.5mm | 120x120 cm 47 1/4"x47 1/4" ± 9mm | 45x90 cm 17 3/4"x35 3/8" ± 9mm | 75x75 cm 29 1/2"x29 1/2" ± 9.5mm | 60x60 cm 23 5/8"x23 5/8" ± 9mm | 30x60 cm 11 3/4"x23 5/8" ± 9mm | |
|-------------------|---|--|-------------------------------------|--|--------------------------------------|--|--------------------------------------|--------------------------------------|--|
|-------------------|---|--|-------------------------------------|--|--------------------------------------|--|--------------------------------------|--------------------------------------|--|

| | Caratteristica tecnica Characteristics | Método de ensayo Test Method | Requisitos por tamaño nominal Requirements for nominal size N | | | MARVEL | | | |
|--|---|---------------------------------|---|--------------|--------------|---|---|---|---|
| | | | 7 cm ≤ N < 15 cm | | N ≥ 15 cm | Polished rectified | Polished rectified ± 6mm 120x278 cm | Matt rectified | Matt rectified ± 6mm 120x278 cm |
| | | | (mm) | (%) | (mm) | | | | |
| Características de tamaño Regularity characteristics | Longitud y anchura Length and width | ISO 10545-2 | ± 0,9 (*) | ± 0,6 (*) | ± 2,0 (*) | ±0.3% ±1.0mm | ±0.3% ±1.0mm | ±0.3% ±1.0mm | ±0.3% ±1.0mm |
| | Grosor Thickness | | ± 0,5 (**) | ± 5 (**) | ± 0,5 (**) | ±5.0% ±0.5mm | ±5.0% ±0.5mm | ±5.0% ±0.5mm | ±5.0% ±0.5mm |
| | Rectitud de los cantos Straightness of sides | | ± 0,75 (***) | ± 0,5 (***) | ± 1,5 (***) | ±0.3% ±0.8mm | ±0.3% ±0.8mm | ±0.3% ±0.8mm | ±0.3% ±0.8mm |
| | Ortogonalità (Misurazione da condurre solo sui lati corti quando L/I ≥ 3) Rectangularity (Measurement only on short edges when L/I ≥ 3) | | ± 0,75 (****) | ± 0,5 (****) | ± 2,0 (****) | ±0.3% ±1.5mm | ±0.3% ±1.5mm | ±0.3% ±1.5mm | ±0.3% ±1.5mm |
| | planaridad Surface flatness | | c.c. ± 0,75 | c.c. ± 0,5 | c.c. ± 2,0 | ±0.3% ±1.5mm | ±0.3% ±1.5mm | ±0.4% ±1.8mm | ±0.4% ±1.8mm |
| | | | e.c. ± 0,75 | e.c. ± 0,5 | e.c. ± 2,0 | | | | |
| w. ± 0,75 | | w. ± 0,5 | w. ± 2,0 | | | | | | |
| Características estructurales Structural features | Absorción de agua (como % de la masa) (come % della massa) Water absorption level (in% by mass) | ISO 10545-3 | E _B ≤ 0,5% Valore massimo 0,6% - Individual Maximum 0,6% | | | ≤0.1% | ≤0.1% | ≤0.1% | ≤0.1% |
| | | ASTM C373-18 | Requirement ANSI A137.1-2017 Water Absorption Max < 0,5% | | | ≤0.5% | ≤0.5% | ≤0.5% | ≤0.5% |
| Características mecánicas de masa Bulk mechanical features | Resistencia de rotura Breaking strength | ISO 10545-4 | S ≥ 700N (per spessore < 7,5mm - for thickness < 7,5mm) S ≥ 1300N (per spessore ≥ 7,5mm - for thickness ≥ 7,5mm) | | | S ≥ 1500 N | S ≥ 1000 N | S ≥ 1500 N | S ≥ 1000 N |
| | Resistencia a la Flexión Modulus of Rupture | | R ≥ 35 N/mm ² | | | R ≥ 40 N/mm ² | R ≥ 40 N/mm ² | R ≥ 40 N/mm ² | R ≥ 40 N/mm ² |
| | Resistenza a Flessione ed al Carico di Rottura Bending Strength and Breaking Load | EN 1339 Annex F | - | | | - | - | - | - |
| | Resistencia al impacto, expresado como coeficiente de restitución Impact resistance, as coefficient of restitution | ISO 10545-5 | Valore dichiarato Declared value | | | ≥0.55 | ≥0.55 | ≥0.55 | ≥0.55 |
| Características mecánicas superficiales Surface mechanical features | Dureza Mohs Mohs hardness | EN 101 | - | | | MOHS 5 | MOHS 5 | MOHS 6 | MOHS 6 |
| | Resistance to deep abrasion of unglazed tiles (removed volume) Resistance to deep abrasion of unglazed tiles (removed volume) | ISO 10545-6 | ≤ 175 mm ³ | | | ≤150mm ³ | ≤150mm ³ | ≤150mm ³ | ≤150mm ³ |
| Caratteristiche Termo-igrometriche Thermo-igrometric features | Coefficiente de dilatación térmica lineal Coefficient of linear thermal expansion | ISO 10545-8 | Valore dichiarato Declared value | | | ≤7 1/mk | ≤7 1/mk | ≤7 1/mk | ≤7 1/mk |
| | Resistencia al choque térmico Thermal shock resistance | ISO 10545-9 | Supera el ensayo de acuerdo con ISO 10545-1 Pass according to EN ISO 10545-1 | | | Resiste | Resiste | Resiste | Resiste |
| | Dilatazione all'umidità (in mm/m) Moisture expansion (in mm/m) | ISO 10545-10 | Valore dichiarato Declared value | | | ≤0.01% (0.1mm/m) | ≤0.01% (0.1mm/m) | ≤0.01% (0.1mm/m) | ≤0.01% (0.1mm/m) |
| | Resistencia a las heladas Frost resistance | ISO 10545-12 | Supera el ensayo de acuerdo con ISO 10545-1 Pass according to EN ISO 10545-1 | | | Resiste | Resiste | Resiste | Resiste |
| Características físicas Physical properties | Resistencia a la tracción de los adhesivos cementosos Bond strength/adhesion for improved cementitious adhesives | EN 1348 | Valore dichiarato Declared value | | | ≥1.0 N/mm ² (Class C2 - EN 12004) | ≥1.0 N/mm ² (Class C2 - EN 12004) | ≥1.0 N/mm ² (Class C2 - EN 12004) | ≥1.0 N/mm ² (Class C2 - EN 12004) |
| | Reacción al fuego Reaction to fire | - | Clase A1 oppure A1 _{fl} Class A1 or A1 _{fl} | | | A1 - A1 _{fl} | A1 - A1 _{fl} | A1 - A1 _{fl} | A1 - A1 _{fl} |
| Características químicas Chemical features | Resistencia a los productos químicos de uso doméstico y a los aditivos para piscinas Resistance to household chemicals and swimming pool salts | ISO 10545-13 | Clase minima B Minimum Class B | | | A | A | A | A |
| | Resistencia a los ácidos y bases de baja concentración Resistance to low concentrations of acids and alkalis | | Clase dichiarata Declared Class | | | LA | LA | LA | LA |
| | Resistencia a los ácidos y bases de alta concentración Resistance to high concentrations of acids and alkalis | | Clase dichiarata Declared Class | | | 0 | - | HA | HA |
| | Resistenza alle macchie piastrelle smaltate Resistance to staining for glazed tiles | ISO 10545-14 | Clase dichiarata Declared Class | | | 5 | 5 | 5 | 5 |
| Características de seguridad Safety characteristics | Método de la rampa "calzado" Shod Ramp Test | DIN 51130 | Clase dichiarata Declared Class | | | N.C. | N.C. | R9 | R9 |
| | Método de la rampa a pies descalzos Barefoot Ramp Test | DIN 51097 | Declared value Valore dichiarato | | | 0 | 0 | A | A |
| | Método del péndulo Pendulum Friction Test | BS 7976 | PTV 36 classifies the surface as "low slip risk" | | | ≥ 36 Dry ≤ 24 Wet | ≥ 36 Dry ≤ 24 Wet | PTV ≥ 36 Wet on demand / su richiesta | PTV ≥ 36 Wet on demand / su richiesta |
| | | AS 4586 | Declared Classification of the new pedestrian surface materials according to the Pendulum Test | | | - | - | P3 on demand | P3 on demand |
| | | UNE-ENV 12633 | Valore dichiarato Declared value | | | - | - | C2 on demand | C2 on demand |
| | Coefficiente de fricción Coefficient of friction (COF) | B.C.R.A. Rep. CEC/81 | D. M. 236/89 del 14/06/89 μ >0,40 per elemento scivolante cuoio su pavimentazione asciutta μ >0,40 per elemento scivolante gomma dura su pavimentazione bagnata | | | >0.40Asciutto <0.40Bagnato | >0.40Asciutto <0.40Bagnato | >0.40Asciutto >0.40Bagnato | >0.40Asciutto >0.40Bagnato |
| | Coefficiente de fricción estática Dynamic coefficient of friction (DCOF) | ANSI A.137.1 | ANSI A.137.1-2017 Requires a minimum value of 0.42 for level interior space expected to be walked upon when wet. (3) | | | <0.42Wet | <0.42Wet | >0.42Wet | >0.42Wet |

- * Deviazione ammissibile, in % oppure mm, della dimensione media di ogni piastrella (2 oppure 4 lati) dalla dimensione di fabbricazione (W).
The permissible deviation, in % or mm, of the average size for each tile (2 or 4 sides) from work size (W).
- ** Deviazione ammissibile, in % oppure mm, dello spessore medio di ogni piastrella dallo spessore riportato nella dimensione di fabbricazione (W).
The permissible deviation, in % or mm, of the average thickness for each tile from the work size thickness (W).
- *** Deviazione massima ammissibile di rettilineità, in % oppure mm, in rapporto alle dimensioni di fabbricazione (W) corrispondenti.
The maximum permissible deviation from straightness, in % or mm, related to the corresponding work sizes (W).
- **** Deviazione massima ammissibile di ortogonalità, in % oppure mm, in rapporto alle dimensioni di fabbricazione (W) corrispondenti.
The maximum permissible deviation from rectangularity, in % or mm, related to the corresponding work sizes (W).
- c.c. Deviazione massima ammissibile della curvatura del centro, in % oppure mm, in rapporto alla diagonale calcolata secondo le dimensioni di fabbricazione (W).
The maximum permissible deviation from centre curvatures, in % or mm, related to diagonal calculated from the work sizes (W).
- e.c. Deviazione massima ammissibile della curvatura dello spigolo, in % oppure mm, in rapporto alle dimensioni di fabbricazione (W) corrispondenti.
The maximum permissible deviation from edge curvatures, in % or mm, related to the corresponding work sizes (W).

- w. Deviazione massima ammissibile dello svergolamento, in % oppure mm, in rapporto alla diagonale calcolata secondo le dimensioni di fabbricazione (W).
The maximum permissible deviation from warpage, in % or mm, related to diagonal calculated from the work sizes (W).
- Determinazione della resistenza allo scivolamento delle superfici pedonabili; non si applica alle pavimentazioni sportive ed alle pavimentazioni stradali veicolari.
- (1) Determination of slip resistance of pedestrian surfaces; it does not cover sports surfaces and road surfaces for vehicles (skid resistance).
- (2) Le prestazioni anti-slip vengono garantite al momento della consegna del prodotto.
Anti-slip performance is guaranteed at the time of delivery of the product.
However, tiles with a DCOF of 0.42 or greater are not necessarily suitable for all projects.
- (3) The specifier shall determine tiles appropriate for specific project conditions, considering by way of example, but not in limitation, type of use, traffic, expected contaminants, expected maintenance, expected wear, and manufacturers' guidelines and recommendations."
- (4) For further details, please refer to outdoor design general catalogue.
- (5) Only for products with 20 mm thickness.

