

Mosa. Tiles.

Porcelain Floor Tiles, unglazed

Product description

Unglazed, dry-pressed, single-fired, fully vitrified porcelain floor tiles, manufactured with the Ultragres procedure, in accordance with EN 14411 Bla, with a water absorption of < 0.05% on the surface and ≤ 0.3% on the underside. Dimensionally stable tiles in sizes ranging from 10 x 10 to 60 x 120 cm, with various surface designs and structures, depending on the series and version. Cradle to Cradle (C2C) Silver certified; designed for the technosphere and safe for the biosphere.

Product advantages

Natural appearance; each tile is a unique product. Extensive range of sizes, including planks and accessories. Smooth and textured versions with appropriate slip resistance properties for each application. Suitable for use with underfloor heating. Durable floor tile for indoors and outdoors. For domestic, utility and commercial use. Also suitable for wall and facade cladding. Rectified tiles can be used in conjunction with Xtreme Glass and Steel. Very hard-wearing. High resistance to chemicals. Easy maintenance. Frost resistant. Dimensionally consistent. Modular. An extensive range of accessories, including skirting, stair and recess shower tiles, that fit with the modular range of wall and floor tiles.

Benefits of the Ultragres procedure

With the Ultragres procedure the surface and underside of the tile have optimal properties: the surface is highly wear resistant and easy to clean, while the underside ensures high strength, very good dimensional stability and good adhesion in cement mortar and tile adhesive.

Sustainability and Cradle to Cradle

Mosa unglazed floor tiles are Cradle to Cradle (C2C) Silver certified. The composition of Mosa tiles is pure, clean and suitable for inclusion in the cradle-to-cradle cycle. This means that they do not release any hazardous substances during or after their long service life. Mosa tiles are produced in our own factories in Maastricht (NL). We utilise renewable energy sources and local materials whenever possible, resulting in a favourable CO₂ balance. Specific data about Mosa tiles are included in the National Environmental Database for calculation of the material-related environmental performance in conformance with the Dutch Building Decree. An Environmental Product Declaration (EPD type III) and MRPI sheet (containing environmentally-related product information) are available upon request via info@mosa.nl. Mosa's tiles are ideally suited for use in sustainable buildings and contribute to the award of hallmarks or points from organisations such as LEED and BREEAM. For current information see www.mosa.nl/en under Sustainability.

NEN-EN-ISO 14001

Since 2007, Mosa have organized their environmental management system according to the international ISO 14001 standard.

Recycling

Mosa unglazed floor tiles contain up to 45% recycled material, depending on product type.

Soil Quality Decree

Mosa Ultragres unglazed floor tiles are KOMO certified in compliance with the Dutch Soil Quality Decree (certificate no. IKB1466). This means that Mosa Ultragres unglazed floor tiles meet with all the environmental requirements of the Dutch assessment guidelines BRL1010 and are suitable for outdoor use including facades.

Mosa. Tiles.

Porcelain Floor Tiles, unglazed

Technical data

In accordance with standard EN 14411 Bla properties and Mosa standard ^A

The below mentioned Mosa standards cover the following production sizes:

non-rectified; 10x10, 15x15, 15x30, 20x20, 30x30

rectified; 30x60, 30x120, 37,5x75, 45x45, 45x90, 60x60, 60x120, 75x75, 90x90, 100x100 cm. ^B

Properties	ISO test	EN 14411 Bla requirements	Mosa standard
Length and width	10545-2	< 15 cm: +/- 0,9mm ≥ 15 cm: +/- 0,6%, max. 2,0mm	≤ 10 cm: +/- 0,5% other non-rectified: +/- 0,3% rectified: +/- 0,3mm ^C
Thickness	10545-2	+/- 5%, max. 0,5mm	< 10mm: +/- 4% ≥ 10mm : +/- 3%
Straightness of sides	10545-2	< 15 cm: +/- 0,75mm ≥ 15 cm: +/- 0,5%, max. 1,5mm	non-rectified: +/- 0,5% rectified: +/- 0,3mm ^C
Rectangularity	10545-2	< 15 cm: +/- 0,75mm ≥ 15 cm: +/- 0,5%, max. 2,0mm	non-rectified: +/- 0,5% rectified: +/- 0,5mm
Edge curvature	10545-2	< 15 cm: +/- 0,75mm ≥ 15 cm: +/- 0,5%, max. 2,0mm	≤ 10 cm; max. +/- 0,4mm >10 cm - ≤ 20 cm; max. +/- 0,6mm >20 cm - ≤ 30 cm; max. +/- 0,8mm >30 cm - ≤ 60 cm; max. +/- 1,1mm >60 cm; max. - 1,2 / + 1,8mm
Centre curvature	10545-2	< 15 cm: +/- 0,75mm ≥ 15 cm: +/- 0,5%, max. 2,0mm	10 cm; max. - 0,4 / + 0,6mm 15 cm; max. +/- 0,8mm other non-rectified: max. +/- 1,2mm 30x60 / 37x75 / 45x45 / 60x60 / 75x75cm; max. +/- 1,5mm other rectified; max. +/- 1,8mm
Warpage	10545-2	< 15 cm: +/- 0,75mm ≥ 15 cm: +/- 0,5%, max. 2,0mm	≤ 20x20 cm; max. +/- 0,4% 15x30 and 30x30 cm; max. +/- 0,3% rectified; max. +/- 1,4mm
Water absorption	10545-3	≤ 0,5%	top surface: < 0,05% underside: ≤ 0,3%
Breaking strength ^D	10545-4	< 7,5 mm: ≥ 700 N ≥ 7,5 mm: ≥ 1300 N	< 7,5 mm: ≥ 1200 N ≥ 7,5 mm: ≥ 1700 N
Bending strength	10545-4	≥ 35 N/mm ²	40 N/mm ²
Impact resistance	10545-5	not required	0,86
Wear resistance	10545-6	≤ 175 mm ³	120 +/- 30 mm ³
Coefficient of linear thermal expansion	10545-8	not required	8 x 10 ⁻⁶ [K ⁻¹]
Thermal shock resistance	10545-9	required	resistant
Frost resistance	10545-12	required	resistant
Chemical resistance - household chemicals and swimming pool additives	10545-13	≥ UB	class UA ^E
Anti-slip value/walking safety			≥ R10 ^F For detailed info, see also the Technical Product Sheet Slip Resistant Floor Tiles, unglazed.
Cradle to Cradle			Silver

Mosa. Tiles.

Porcelain Floor Tiles, unglazed

- A Assuming there is no change to the surface of the tiles. A treatment applied to Mosa floors by third parties after installation, such as a chemical or mechanical anti-slip treatment, can have a negative impact on the appearance and physical properties of the floor tiles. Mosa does not accept any liability for this.
- B Dimensionality, straightness and curvature (ISO 10545-2) of all (specially produced) different and derivative sizes and products comply at least to the requirements stipulated in EN 14411 group BIa.
- C Including Terra Maestricht® 15 x 15 cm rectified (V and RL)
- D Breaking strength requirements (ISO 10545-4) do not apply to oblong sizes.
- E Chemical resistance to acids and alkalis: Class ULA (low concentrations) and UHA (high concentrations); A = highest class.
- F Except for Terra Maestricht colours 200 (cool porcelain white) and 210 (warm porcelain white); R9.

Dimensions

Modular dimensions vs manufacturing dimensions

Production is based on manufacturing dimensions, in accordance with Mosa's modular system. The modular size is expressed in centimetres, while the manufacturing size is expressed in millimetres. A modular size of 15 x 15 cm is equivalent to a manufacturing size of 146 x 146 mm. The tiles are intended for installation with a 3 or 4 mm grout line.

Non-rectified floor tiles may have other manufacturing dimensions (=calibres), within the tolerances of the Mosa standard. The calibre code is shown on the floor tile packaging. Mosa pallets always contain tiles of a single calibre. Always use tiles of the same calibre when working on a single large surface.

Rectified

All tiles > 30x30 cm have ground-to-size edges and can be installed with a minimum grout line width of 2 mm.

Shades and design

Tiles are a natural product. Colour differences may occur. Mosa sorts products by shade which is indicated on the box. When applying plank patterns consisting of different sizes, different shades may be supplied.

The surface design of Mosa unglazed floortiles is the result of a randomized scattering process; every tile is unique. The surface of supplied tiles may deviate from shown samples.

Article coding on the packaging

The following information can be derived from the coding on the packaging:

Sample article coding on packaging: 216 V 060060 1 77 AA 0 X03

216	colour	
V	surface indication	V/VV surface RG/RL/RM/RQ relief/anti-slip AS/LS/TS/WS/XS anti-slip
060060	nominal size 60 x 60 cm	
1	grade	Mosa only packages and delivers grade 1 tiles.
77	calibre designation	Manufacturing size 597 x 597 mm, modular with 3 mm grout line.
AA	tint designation	
0	thickness designation	Standard 0. If a standard article is to be produced in a non-standard thickness, a different thickness designation will be shown here.
X03	packaging code	Indicates the type of box and the number of pieces per box.

HACCP

Various series include matching, modular thin coved skirting and tile skirting with internal and external corners for rounded transitions between tiled walls and floors. The use of thin cover skirting is particularly recommended in areas subject to HACCP requirements, such as:

- bakeries
- fruit and vegetable processing areas
- hotels, restaurants and cafés
- supermarkets
- slaughterhouses and butcher shops
- fish processing and retailing areas
- food preparation areas
- dairy production and processing areas
- breweries
- changing and shower rooms

The Global Collection and Softline series also include an extensive range of slip resistant products and special solutions for curved wall/floor transitions and corners.

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Light reflectance value

The light reflectance value (LRV) is the ratio of the total quantity of light reflected from a surface to the total quantity of incident light on the surface.

The LRV can be used to determine the contrast between different colours. LRV is important for tasks such as preparing a lighting plan and selecting colours for non-ventilated facades. See the Mosa documentation or www.mosa.nl/en for the indicative LRV for each colour.

Facade cladding

Because they are manufactured using the Ultragres procedure, in accordance with EN 14411 Bla, unglazed Mosa floor tiles are frost resistant and suitable for use as facade cladding. Attachment and anchoring must be carried out in accordance with the instructions of the constructor and/or the work specifications.

For detailed information about facade cladding, visit www.mosafacades.nl or contact Mosa Facades bv; Tel: +31 (0)43 368 88 50; Fax: +31 (0)43 368 88 40.

Tiling recommendations

Mosa floor tiles can be installed with any conventional tiling method, using any mortars, adhesives (EN 12004 type C2) and grout compounds (EN 13888) suitable for fully vitrified porcelain tiles.

Due to the random scattering pattern during the production process, the tile surface has a directional pattern. Please keep this in mind when placing the tiles.

Planks

Planks from the Mosa unglazed floor tile collection are modular and can be used to create a continuous pattern with floor tiles of sizes 60 x 60, 90 x 90 and 60 x 120 cm. For use on walls, floors and facades. Due to the flatness tolerances of the substrate and the planks, slight unevenness in the tiled wall cannot be ruled out when tiles are installed in a brickwork pattern. Any resulting shadows will be accentuated by raking light.

For detailed installation recommendations see the Mosa documentation or www.mosa.nl/en.

Maintenance

See www.mosa.nl/en for the latest maintenance recommendations.

Samples

showroomservice@mosa.nl; Tel.: +31 (0)43 368 93 23

General questions

Sales Support: info@mosa.nl; Tel.: +31 (0)43 368 92 29; Fax: +31 (0)43 368 93 56



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The text for this Technical product sheet replaces all preceding versions and has been composed with the utmost care and in cooperation with the leading mortar and adhesive producers. All recommendations are based on the latest research. This Technical Product Sheet contains information about Mosa products, properties and applications, and should not be construed as a guarantee based on the provided recommendations. Mosa accepts no liability based on the content of this document. For information concerning warranties and liability please refer to our General Terms and Conditions of Sale. No rights can be derived from the contents of this Technical Product Sheet. We take no responsibility for typographical errors. For the latest version, see www.mosa.nl.