

Ultragres Slip-resistant

Product description Unglazed, single-fired, fully vitrified, slip-resistant floor tiles in accordance with EN 14411 B1a manufactured with the two-layer Ultragres-process offering a water absorption of < 0.05% on the surface and ≤ 0.3% on the underside. The surfaces have various structures, depending on the slip-resistance value (R).

Product advantages Offers an appropriate slip-resistance tile for every situation. Extremely high resistance to rupture and breaking. Resistant to chemicals. Easy to maintain. Frost proof. Very consistent sizing. May be fixed with paste adhesives as well as mortars due to the two-layer concept. Durable floor tile for indoor and outdoor applications. Suitable for all commercial, utility and domestic situations. A special dirt-repellent coating (microseal) to all tiles with surface structure AS, LS, TS, WS, XS makes cleaning even easier. TNO has established that Globalgrip AS and Softgrip with microseal permanently inhibit the common bacteria *S. aureus*. Matching stair-treads and other accessories available.

Advantages of the Ultragres-process

In the Ultragres-process the top layer and body have slightly different compositions, thus giving top and bottom optimal properties. The top layer is easy to clean and has very high resistance to rupture and breaking and the body guarantees excellent size-consistency and installation-properties.

Application

Floor tiles may become slippery when wet, causing slipping and accidents. International standards apply to the slip-resistance of tiles in any situation. In general, the DIN standards are followed (DIN 51130 - slip-resistance with shoes, expressed in R, and DIN 51097 - barefoot slip-resistance, expressed in A, B, C). DIN has standards for every situation. These standards may vary per country. Please consult the local authority for these.

R-value according to DIN 51130*

For projects in the utility sector with generally 'dry shod' traffic a minimum of R9 applies.

Mosa has an extensive list of advised values for every type of workroom (for your individual situation, please contact Mosa Sales Support: +31 (0)43 368 92 29).

Often recurring situations

Required R-value	Slip-risk per type of project floor	Examples
R10	Normal	Public areas, sanitary areas, hospitals
R11	Increased	Industrial kitchens (< 100 seats), meat and vegetable shops, workrooms
R12	High	Very wet production areas, industrial kitchens (> 100 seats)
R13	Very high	Very wet and greasy areas; meat and fish processing, canning

* The V-value may also be important. This value is added to the R-value and gives an indication of the water-displacement of the structure.

A,B,C values according to DIN 51097

For barefoot areas.

Value	Suitable for
A	Barefoot areas, mostly dry
A+B	Shower rooms and pool floors no deeper than 80 cm
A+B+C	Sloping pool edges and underwater steps

FSC-rating

Measured according Floor Side Control FSC 2000 (Protocol TNO-IND/MP027.1); applies in wet and dry conditions: $0.25 \leq \mu \leq 0.8$.

Mosa Globalgrip AS and Softgrip have been tested and approved.

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Product specification

Dimensions, thicknesses, surface structures and names of ranges

Tile surface structure	Modular size in cm incl. 3 mm joint	Production size* in mm	Mosa name of range
V	10 x 10	96 x 96 x 8**	Global Collection
	15 x 15	146 x 146 x 8** 147 x 147 x 10	Global Collection, Softline
			Terra Maestricht
	30 x 30	296 x 296 x 8**	Global Collection
	30 x 60	296 x 296 x 10** 297 x 597 x 12	Greys, Terra Maestricht (Xtreme Ceramics)
			Beige & Brown, Terra Maestricht
	37.5 x 75	372 x 747 x 12	Size 75
	45 x 45	446 x 446 x 10**	Beige & Brown, Global Collection, Terra LED, Terra Maestricht (Xtreme Ceramics)
			Beige & Brown, Greys, Quartz, Terra LED, Terra Maestricht (Xtreme Ceramics)
	60 x 60	597 x 597 x 12	Size 75
	75 x 75	747 x 747 x 12	Quartz, Terra XXL
	90 x 90	897 x 897 x 13	Beige & Brown, Terra Maestricht
	5 x 60	47 x 597 x 12	Beige & Brown, Terra Maestricht
	10 x 60	97 x 597 x 12	Beige & Brown, Terra Maestricht
	15 x 60	147 x 597 x 12	Beige & Brown
	20 x 60	197 x 597 x 12	Terra XXL
	30 x 120	297 x 1197 x 13	Terra XXL
40 x 120	397 x 1197 x 13	Terra XXL	
60 x 120	597 x 1197 x 13	Terra XXL	
RL	15 x 15	147 x 147 x 10	Terra Maestricht
	30 x 30	296 x 296 x 10**	Terra Maestricht
	30 x 60	297 x 597 x 12	Terra Maestricht
	45 x 45	446 x 446 x 10**	Terra Maestricht
	60 x 60	597 x 597 x 12	Terra Maestricht
	5 x 60	47 x 597 x 12	Terra Maestricht
	10 x 60	97 x 597 x 12	Terra Maestricht
	15 x 60	147 x 597 x 12	Terra Maestricht
RQ	60 x 60	597 x 597 x 12	Quartz
	90 x 90	897 x 897 x 13	Quartz
RG	10 x 60	96 x 596 x 12**	More than white
	15 x 60	146 x 596 x 12**	More than white
	20 x 60	196 x 596 x 12**	More than white
AS	10 x 10	96 x 96 x 8**	Globalgrip
	15 x 15	146 x 146 x 8**	Globalgrip, Metrogrip
	30 x 30	296 x 296 x 8**	Globalgrip
TS, WS, XS	15 x 15	146 x 146 x 8**	Globalgrip
LS	15 x 15	146 x 146 x 8**	Softgrip
N	10 x 10	96 x 96 x 8**	Ceram
MZVV, MZVR	30 x 30	298 x 298 x 10***	Mosa XXS

* The production is set on fixed production sizes as mentioned above. Within the production process of ceramic non rectified floor tiles, it's possible that besides the fixed production sizes other sizes (= calibres) are produced. Hence the calibre code on the boxes of the floor tiles. Mosa always delivers one calibre per pallet. Always use only one calibre when fixing one surface.

** Recommended joint of 4 mm for modular system.

*** Recommended joint of 2 mm for modular system.

• All tiles (except the sizes 96 x 96, 146 x 146 and 296 x 296 mm) are rectified and can be installed with a minimum joint of 2 mm.

• The tiles from the Beige & Brown, Greys, Quartz, Size 75, Terra LED, Terra Maestricht (Xtreme Ceramics) and Terra XXL ranges have got a linear pattern. Mosa advises to fix all (square) tiles in the same direction.

• Global Collection has modular wall tiles which have been fully attuned to the floor tiles. See also Technical product sheet Glazed Wall Tiles.

• Global Collection and Softline have specific solutions for sloping wall-floor-transitions and corners. See also Technical product sheet Thin Coved Skirting.

Price groups

See price group information under series in the Mosa documentation or www.mosa.nl.

Shades

Tiles are a natural product. Minor shade differences may occur. Mosa sorts products according shade which is printed on the box.

Accessories

Various ranges have matching skirtings and stair-treads.

Technical data
Slip-resistance

R-value	Mosa name of range
R10	Beige & Brown V, Ceram N, Global Collection V, Greys V, Quartz V, Size 75 V, Softline V, Terra Maestricht V (excl. 200V/210V), Terra XXL V, Mosa XXS MZVV/MZVR
R11	Globalgrip AS/TS, Metrogrip AS, More than white RG, Quartz RQ, Softgrip LS, Terra Maestricht RL
R12	Globalgrip WS
R13	Globalgrip XS

V-value	Mosa name of range
V4	Globalgrip WS
V6	Ceram N
V10	Globalgrip XS

A, B, C-value	Mosa name of range
A	Global Collection V (excl. 15 x 15), Softline V
A+B	Ceram N, Global Collection V 15 x 15, Globalgrip AS, Quartz RQ, Softgrip LS
A+B+C	Globalgrip TS/WS, Metrogrip AS, More than white RG, Terra Maestricht RL

Properties according standard EN 14411 Bla and Mosa standard*

Property	ISO-Test	Standard EN 14411 Bla	Mosa standard
Length and width	10545-2	10 x 10: +/- 1% 15 x 15: +/- 0.75% ≥ 30 x 30: +/- 0.6%	10 x 10: +/- 0.3%
			15 x 15: +/- 0.3% (Global Collection / Softline)
			15 x 15: +/- 0.14%**
			30 x 30: +/- 0.04%** (Mosa XXS)
			30 x 30: +/- 0.3%
			30 x 60: +/- 0.03%**
			37.5 x 75: +/- 0.03%**
			45 x 45: +/- 0.2%** (Global Collection)
			45 x 45: +/- 0.04%**
			60 x 60: +/- 0.03%**
75 x 75: +/- 0.03%**			
90 x 90: +/- 0.02%**			
60 x 120: +/- 0.03/0.02%**			
Thickness	10545-2	+/- 5%	+/- 3%
Straightness of sides	10545-2	+/- 0.5%	15 x 15: +/- 0.05% (Terra Maestricht)
			15 x 15: +/- 0.5%
			30 x 30: +/- 0.3%
			45 x 45: +/- 0.2% - 0.3%
			90 x 90: +/- 0.01%
			60 x 120: +/- 0.01%
other dimensions: +/- 0.02%			
Warpage	10545-2	+/- 0.5%	10 x 10: +/- 0.4% 15 x 15: +/- 0.4% other dimensions: +/- 0.2%
Water absorption	10545-3	≤ 0.5%	toplayer: < 0.05% body: ≤ 0.3%
Breaking load	10545-4	< 7.5 mm: 700 N ≥ 7.5 mm: 1300 N	8 mm: 1600 N 10 mm: 2600 N
Bending strength	10545-4	35 N/mm ²	40 N/mm ²
Resistance deep abrasion	10545-6	175 mm ³	120 +/- 30 mm ³
Coefficient of linear thermal expansion	10545-8	9 x 10 ⁻⁶ [K ⁻¹]	8 x 10 ⁻⁶ [K ⁻¹]
Thermal shock resistance	10545-9	required	resistant
Frost resistance	10545-12	required	resistant
Chemical resistance	10545-13		class UA***

* Non-slip treatment of Mosa floors by third parties: the optical and physical features of floor tiles may be altered by chemical treatment. In that event, Mosa cannot be held liable.

** Tiles with rectified edges (e.g. the series Terra Maestricht).

*** Chemical resistance to household chemicals, swimming pool salts, acids and alkalis:
class UA = highest class = no visible effects, not even after pencil test.

Installation instructions	<p>For interior floors</p> <p>Mosa Ultragres floor tiles can be installed using all conventional mortars, adhesives and grouts for fully vitrified ceramic tiles, according to the conventional application methods.</p> <p>For adequacy and instructions for application the user should inform with the manufacturer of adhesives.</p> <p>If they are to be laid on fresh mortar, tiles of 30 x 30 cm should receive a contact coating. This is essential from 30 x 60 cm tiles upwards.</p> <p>The subfloor should be sufficiently even - from 30 x 60 cm upwards completely even -, form stable, pressure proof, dry and free of dirt, residues and cracks.</p> <p>The modular sizes are including a 4 mm joint and for Terra XXL 3 mm.</p> <p>The sizes from 30 x 60 cm upwards (with rectified edges) can be installed with a minimal joint of 2 mm.</p> <p>When using an adhesive, the adhesive should cover 90% of the surface.</p> <p>Installing 60 x 60 cm tiles using adhesive: use half-mooned adhesive spreader (10 or 15 mm) in combination with the buttering floating method.</p> <p>Recommended adhesives: Eurocol 705, Omnicol Stabicol PL85 Project, Schönox TT-Midiflex Grey, Laticrete 317 with addition 333, Laticrete Platinum Multipurpose.</p> <p>For Terra XXL see separate installation instructions.</p> <p>Tiles can be cut to size using a tile cutter with Widia-blade or using a water-cooled diamond saw.</p> <p>Dilatation should be made in conformation with instructions of constructor or specifications.</p> <p>Grouting should be done according specifications grout-manufacturer.</p> <p>Recommended grouts for approx. 2 mm joints: Eurocol 698, Omnicol Temo, Schönox SU, Laticrete 1600-serie.</p> <p>The cement haze needs to be removed thoroughly with proper remover.</p> <p>In order to remove possible cementations bloom from the structure of the tile more easily it is advisable to apply a protective coating on the surface, e.g. HMK P23 (Möller Chemie) before grouting. This protective coating together with the cement film will be easily removed by the cement film remover afterwards. The appearance of the structured surface will not change. When used staggered, flatness tolerances in the back wall and the tile may cause some unevenness in the wall or a shadow effect. This effect is accentuated in oblique light.</p>
Relevant Technical product sheets	<p>Ultragres Fully Vitrified Unglazed</p> <p>Ultragres Terra Maestricht</p> <p>Ultragres Terra XXL</p> <p>Terra LED</p> <p>Xtreme Glass, Steel, Ceramics</p> <p>Mosa XXS</p> <p>Thin Coved Skirting</p> <p>Sloping Shower Edge Tile</p> <p>Mosa Matt Collection®</p> <p>More than white</p>
Maintenance	<p>Please consult Mosa documentation or www.mosa.nl</p>
Sampling	<p>showroomservice@mosa.nl; Tel.: +31 (0)43 368 93 23</p>
General inquiries	<p>Sales Support: servicedesk@mosa.nl; Tel.: +31 (0)43 368 92 29; Fax: +31 (0)43 368 93 56</p>

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 current state-of-the-art knowledge. This Technical product sheet contains information about Mosa products, properties and applications, and therefore may not to be used as a guarantee for the stated recommendations. Mosa will not be held responsible should this information be used as a guarantee. For warranties and liability we refer to our General Terms and Conditions of Sale. No rights can be derived from the contents of this Technical product sheet. Errors and price alterations excepted. For the most actual version see www.mosa.nl.



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