MARGRES
CERAMIC TILES

LINEA ENDLESS

# Tender Specifications

Supply of ceramic wall and floor tiles

## Product characteristics

**Unglazed Porcelain Tiles (UGL)**

Margres Linea laminated porcelain tiles, totally carbon neutral (CO2 generated from the life cycle 100% neutralized), produced in a maximum size of 3000x1000mm and 5mm thick, reinforced with fibreglass mesh, obtained from raw materials of the highest quality and purity (light clay, feldspar and ceramic pigments with high chromatic performance), and manufactured by dry pressing on a belt of atomized powder, subsequently sintered by means of industrial firing at temperatures exceeding 1200 °C.
The innovative Linea manufacturing process produces a final product which is light, flat and flexible, but at the same time compact, non-absorbent, frost-resistant, resistant to stains, chemical attack and thermal shock. The application of the fibreglass mesh gives the product high resistance and extreme versatility and ease of use for a wide range of applications in the architectural world.

The Linea Endless collection complies with the regulations required for top quality products in Europe according to EN 14411 - Annex G and internationally through ISO 13006 - Annex G.

| Commercial description of the product | |
|---|---|
| Brand | Margres |
| Collection | Linea Endless |
| Colours | Calacatta Gold, Breccia Capraia, Travertino, Port Black, Amazonite |
| Sizes | 100x300 _ 100x250 _ 100x100 |
| Finish - Surface | Smooth (SM)* _ Polished (P) |
| Finish - Edge | Rectified |
| Thickness | 5,5mm |

* available in colours Calacatta Gold, Breccia Capraia and Travertino

ISO 9001 | ISO 14001 | ISO 50001 · EMAS · ENVIRONMENTAL PRODUCT DECLARATION · LEED · GREENGUARD GOLD · HEALTHY BUILDING PRODUCTS · HEALTH PRODUCT DECLARATION

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## Technical features

Product type: **Unglazed Porcelain Tiles (UGL)**
According to: ISO 13006 - Annex G (Group BIa), EN 14411 - Annex G (Group BIa)

| Technical features | | Test method | Required value ISO 13006 / EN 14411 | Typical Value Linea |
|---|---|---|---|---|
| Dimensions | Lenght and width | EN ISO 10545-2 | Rect. ± 0,3% , máx ± 1 mm | Conform |
| | Side straightness | | Rect. ± 0,3% , máx ± 0,8 mm | Conform |
| | Rectangularity | | Rect. ± 0,3% , máx ± 1,5 mm | Conform |
| | Warpage | | Rect. ± 0,4% , máx ± 1,8 mm | Conform |
| | Thickness | | ± 5% máx ± 0,5 mm | Conform |
| Water absorption | | EN ISO 10545-3 | ≤ 0,5% | 0,1% (*) |
| Modulus of rupture | | EN ISO 10545-4 | ≥ 35 N/mm² | 45 N/mm² |
| Abrasion resistance | | EN ISO 10545-6 | ≤ 175mm³ | Conform |
| Linear thermal expansion | | EN ISO 10545-8 | As indicated by manufacturer | $\alpha \leq 7x10^{-6}$ °C$^{-1}$ |
| Frost resistance | | EN ISO 10545-12 | Required | Resistant |
| Chemical resistance (**) | | EN ISO 10545-13 | As indicated by manufacturer UGL | LA - HA Resistent<br>LB - HB (polished) |
| Stain Resistance | | EN ISO 10545-14 | As indicated by manufacturer UGL | Class 5 Resistent<br>Class ≥3 (polished) |
| Shade Variation | | ANSI A137.1 | V0 None _ V1 Minor<br>V2 Low _ V3 Medium _ V4 Major | V2 Slight variation |
| Recomended joint (***) | | Indoor (wall)<br>Indoor (floor) | - | Minimum 1mm<br>Minimum 2mm |
| | | Outdoor (wall) | - | Minimum 5mm |
| Fire reaction | | EN 13823<br>EN 9239-1 | CPR (UE) 305/2011,<br>2000/147/E,<br>UNI EN 13501-1 | Class A2 - s1,d0 (wall)<br>Class $A2_{fl}$ - s1 (floor) |
| Thermal conductivity | | EN 12524 | - | λ = 1,3 W/m ºK<br>λ = 0.7 BTU/ft h º F |

It is guaranteed the compliance with the values required by norm EN 14411 Group BIa UGL. Typical Value is merely indicative, which can vary from real data, and does not have the purpose of any trading proposal.
* Average value referred to ceramic material only.
** Excluding hydrofluoridric acid and its derivatives.
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Linea Endless is suitable for light residential or commercial use, with low traffic - except areas subject to the passage of heavy, concentrated loads (for example, hard-wheeled trolleys).
Products with a polished finish are more sensitive to abrasion and stains, what requires special conditions. Please check technical information on chapter 9 from Margres general catalogues.

# Tender Specifications

## Quality and environmental certifications

Certification ISO 9001 - ISO 14001 - ISO 50001
Quality, Environment and Energy Management Systems.
For establishments seeking low environmental impact and high efficiency.

download ISO 9001, ISO 14001 and ISO 50001

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DoP - Performance Declaration
The CE mark is a safety certification required by the European Union with the intention of safeguarding health and safety.

download Dop laminated porcelain slabs plus

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EMAS
Community eco-management and auditing system. Being green and transparent.

download EMAS

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LEED
Margres is a member of the U.S. Green Building Council and of the Green Building Council ITALIA. These organizations promote the construction of buildings and other works which respect the environment as well as the health and well-being of the people who live and work within them.

download U.S. Green Building Council and Green Building Council Italy

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EPD
The Environmental Product Declaration

download EPD laminated porcelain slabs 5plus (5,5mm)

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GREENGUARD GOLD
GREENGUARD certifies products that guarantee the highest standards of air quality in indoor environments.

download Greenguard Gold

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HEALTHY BUILDING PRODUCTS

download Declare laminated porcelain tiles

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HPD
Health Product Declaration

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## Quality and environmental certifications

THINK ZERO
Thing Zero is the revolution for sustainable ceramic tiles. The ultra-thin ceramic slabs reduce environmental impacts withuout reducong performance.

download Think Zero

Protect® antibacterial technology
Continuous, effective and long-lasting protection against the proliferation of bacteria, tested and certified according to ISO 22196 and ASTM E3031. Anti-slip finish doesn't have antibacterial protection.

download Protect

KEY-MARK / CERTIQUALITY-UNI
The KEY-MARK and the Certiquality-UNI marks confirm that the certified products are compliant with the EU laws regarding ceramic tiles.