

TECHNICAL DATA

“MARMI NATURALI” Series

1. Technical Features

UNI EN 14411 - Annex L –Dry-pressed ceramic tiles - GROUP BIII GL

	Technical features	Norms	Required standards	Average
REGULARITY AND QUALITY SURFACE CHARACTERISTICS	LENGTH AND WIDTH (The deviation, in percent, of the average size for each tile (2 or 4 sides) from the work size (W))	UNI EN ISO 10545-2	± 0,6 %	IN ACCORDANCE
	THICKNESS		± 5 %	IN ACCORDANCE
	STRAIGHTNESS OF SIDES		± 0,3 %	IN ACCORDANCE
	RECTANGULARITY		± 0,5 %	IN ACCORDANCE
	SURFACE FLATNESS		+ 0,5 % , -0,3% (Curvatura centro e spigolo) ± 0,5 % (svergolamento)	IN ACCORDANCE
	SURFACE QUALITY		A minimum of 95% of tiles shall be free from visible defects that would impair the appearance of a major area of tiles	IN ACCORDANCE
PHYSICAL CHARACTERISTICS	WATER ABSORPTION	UNI EN ISO 10545-3	10 % < Eb (<20 %)	IN ACCORDANCE
	BREAKING STRENGTH (S) – MODULUS OF RUPTURE (R)	UNI EN ISO 10545-4	S > 600 N R > 15 N/mm ²	IN ACCORDANCE
	CRAZING RESISTANCE	UNI EN ISO 10545-11	REQUIRED	IN ACCORDANCE
CHEMICAL CHARACTERISTICS	RESISTANCE TO HOUSEHOLD CHEMICALS AND SWIMMING POOL SALTS	UNI EN ISO 10545-13	Class GB min.	RESISTANT
	RESISTANCE TO LOW CONCENTRATIONS OF ACIDS AND ALKALIS		Manufacturer to state classification	RESISTANT
	RESISTANCE TO STAINING	UNI EN ISO 10545-14	Minimum Class 3	IN ACCORDANCE

2. Sizes, Finishings:

2.1 Sizes: 32.5X65 – 25X45

2.2 Colours: 12 (Rosa Aurora, Bianco Statuario, Crema Marfil, Bianco Perla, Rosa Ducale, Azul Cielo, Perlato, Scabos Sunset, Verde India, Azul Macaubas, Giallo Reale, Alicante)

2.2 Finishings: Rectified

3. Process features

The MARMI NATURALI series is realized in porcelain stoneware by dry pressing of a mix of spray-dried bodies obtained from precious natural raw materials. The obtained substrate is later silk-screen printed (decorated) and

fired at over 1100°C, temperature needed to reach the sintering necessary to make the product frost-proof, non-absorbing and resistant to chemical attacks.

4. In accordance with standards



MARMI NATURALI is a material that ensures compliance, as far as the first choice is concerned, with the requirements specified in the international standards UNI EN 14411 appendix G and ISO 13006, for the surface chemical and physical features; the compliance is extended to all commercial choices for the safety features connected with the CE marking. MARMI NATURALI is also CCC certified.

The Quality management system - implemented by the company and certified according to the standard UNI EN ISO 9001:2008 - ensures a steady compliance.



5. Environmental Certification



5.1 ANAB-ICEA

Naxos, for MARMI NATURALI, has successfully gained the ANAB-ICEA product labeling which, according to the requirements of the EN ISO 14024 norm, ensures that the products bearing the ANAB mark:

- are obtained from raw materials mined with a reduced environmental impact
- do not contain substances harmful for man and the environment
- are obtained from a productive process which is strictly checked and with a reduced environmental impact
- do not release polluting substances in the surrounding environment.

The ANAB certification can aid reaching the requirements needed to obtain the benefit granted by the new Italian HOME PLAN (at least in regions relating the cubage benefits with the use of bio-building materials and techniques).

5.2 LEED Rating System

MARMI NATURALI guarantees the following LEED credits:



Credit SS 7.1/7.2 - Heat Island Effect: MARMI NATURALI does not increase the temperature of city areas compared to country areas (No heat island effect), as the solar reflectance index SRI is ≥ 29 . MARMI NATURALI is thus particularly suitable for outdoor roofed and non-roofed installations.

Credit EA 1 - Optimize energy performance: heat conductivity λ of MARMI NATURALI ranges between 1 and 1.3 Watt/(m·K). Therefore MARMI NATURALI is provided of very good insulating performance.

Credit EQ 4.2 - VOC content: MARMI NATURALI does not emit VOC (Volatile Organic Compounds), as certified by qualified external laboratories.

Credit MR 1.2 - Building re-use: MARMI NATURALI can contribute to this credit by coating existing floors and walls, renovating surfaces and structures avoiding their demolition and rebuilding.

Credit MR 2.1-2.2 - Management of building wastes: MARMI NATURALI can contribute to this credit, as all ceramic tiles can be totally considered as recovered materials to be used as aggregates for different filling operations (substrates, embankments, etc.).

Credit MR 5.1-5.2 – Regional materials: 65% of the materials used to produce MARMI NATURALI comes from quarries located within 500 miles from its production headquarters.

Credits ID 1.1-1.4 - Innovation in Design:

- MARMI NATURALI is ANAB/ICEA certified and this is an innovative performance as for the environmental benefits offered by the product.

TECHNICAL DATA

“MARMI NATURALI” Series – Porcelain Floors

1. Technical Features

UNI EN 14411 - Annex G –Dry-pressed ceramic tiles with low water absorption - GROUP B1aGL

	Technical features	Norms	Required standards	Average
REGULARITY AND QUALITY SURFACE CHARACTERISTICS	LENGTH AND WIDTH (The deviation, in percent, of the average size for each tile (2 or 4 sides) from the work size (W))	UNI EN ISO 10545-2	± 0,6 %	IN ACCORDANCE
	THICKNESS		± 5 %	IN ACCORDANCE
	STRAIGHTNESS OF SIDES		± 0,5 %	IN ACCORDANCE
	RECTANGULARITY		± 0,6 %	IN ACCORDANCE
	SURFACE FLATNESS		± 0,5 %	IN ACCORDANCE
	SURFACE QUALITY		A minimum of 95% of tiles shall be free from visible defects that would impair the appearance of a major area of tiles	IN ACCORDANCE
PHISICAL CHARACTERISTICS	WATER ABSORPTION	UNI EN ISO 10545-3	Eb ≤ 0,5 %	IN ACCORDANCE
	BREAKING STRENGTH (S) – MODULUS OF RUPTURE (R)	UNI EN ISO 10545-4	S > 1300 N R > 35 N/mm ²	IN ACCORDANCE
	CRAZING RESISTANCE	UNI EN ISO 10545-11	REQUIRED	IN ACCORDANCE
	RESISTANCE TO FROST	UNI EN ISO 10545-12	REQUIRED	IN ACCORDANCE
CHEMICAL CHARACTERISTICS	RESISTANCE TO HOUSEHOLD CHEMICALS AND SWIMMING POOL SALTS	UNI EN ISO 10545-13	Class GB min.	RESISTANT
	RESISTANCE TO LOW CONCENTRATIONS OF ACIDS AND ALKALIS		Manufacturer to state classification	RESISTANT
	RESISTANCE TO STAINING	UNI EN ISO 10545-14	Minimum Class 3	IN ACCORDANCE

2. Sizes, Finishings:

2.1 Sizes: 32,5x32,5 – 33,3x33,3 (Scabos Sunset, Verde India, Azul Macaubas)

2.2 Colours: 8 (Bianco Statuario, Crema Marfil, Azul Cielo, Scabos Sunset, Verde India, Azul Macaubas, Giallo Reale, Alicante)

2.2 Finishings: Natural, Rectified

3. Process features

The MARMI NATURALI series is realized in porcelain stoneware by dry pressing of a mix of spray-dried bodies obtained from precious natural raw materials. The obtained substrate is later silk-screen printed (decorated) and fired at over 1200°C, temperature needed to reach the sintering necessary to make the product frost-proof, non-absorbing and resistant to chemical attacks.

4. In accordance with standards



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