

PRODUCT CERTIFICATE

Finished Product Laboratory

ISO 13006-10545

Equivalent to the Brazilian Norm NBR 15463/NBR 13818

Dry-pressed ceramic tiles with low water absorption $E_b \leq 0,5\%$

PRODUCT: BIANCO 30X60 NAT (natural) Bold

TIPOLOGY: PORCELAIN TILE

SIZE: 30X60

CODE: 25533E

LINE: TRAVERTINO NAVONA



Characteristics	Test as per	Results
Physical		
Water Absorption (%E)	ISO 10545-3 NBR 13818 - annex: B ($E \leq 0,5\%$)	0,5
Coefficient of Linear Thermal Expansion 50 at 500°C (°C ⁻¹)	ISO 10545-8 NBR 13818 - annex: K	$\alpha = 68 \pm 2,0 \cdot 10^{-7}$
Modulus of Breaking Strength (MPa)	ISO 10545-4 NBR 13818 - annex: C (NBR 15463 Average: ≥ 37)	37
Breaking Load (N)	ISO 10545-4 NBR 13818 - annex: C (NBR 15463 Average: ≥ 1500)	1500
Moisture Expansion (mm/m)	ISO 10545-10 NBR 13818 - annex: J	0,1
Resistance to Deep Abrasion (mm ³)		NA
Crazing Resistance	ISO 10545-11 NBR 13818 - annex: F	Resist
Resistance to Thermal Shock	ISO 10545-9 NBR 13818 - annex: L	Resist
Chemical		
Resistance to Stains		
Green staining agent in light oil		4
Red staining agent in light oil	ISO 10545-14 NBR 13818 - annex: G (Minimum: 3)	5
Iodine		5
Olive Oil		5
Chemical Resistance		
Hydrochloric Acid 3% (v/v)		A
Potassium Hydroxide 30g/L		B
Citric Acid 100g/L		A
Lactic Acid 5% (v/v)	ISO 10545-13 NBR 13818 - annex: H (Minimum: B)	A
Hydrochloric Acid 18% (v/v)		A
Potassium Hydroxide 100g/L		B
Ammonium Chloride 100g/L		A
Sodium Hypochloride 20mg/L		A

Thermal

System *

Dynamic Coefficient of Friction

Dry Surface	NBR 13818 - annex: N Method: TORTUS III (Minimum Average Value)	0,5
Wet Surface		0,4
Wet Surface	ANSI A137. Section 9.6 (Minimum Average Value 0,42)	0,6

Recommendations for Use

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Recommendation for Application

Wet areas (according to NBR 15575) WHOSE CONDITION OF USE AND EXPOSURE MAY RESULT IN THE FORMATION OF WATER BLADE FOR THE NORMAL USE WHICH THE ENVIRONMENT IS INTENDED FOR: INTERNAL RESIDENTIAL ENVIRONMENTS, COVERED BALCONIES, CONDOMINIUM HALLS, BATHROOMS WITH SHOWERS.

* If properly installed according to ABNT NBR 13.753.

** For traditional structures of reinforced concrete according to NBR 6118 does not interfere significantly in the system results. For other types of structure, should proceed with testing on-site or prototype according to NBR 15.575.

Tijucas, 10/08/2017



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