

# 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:** TRAVERTINO NAVONA BIANCO  
60X120 Natural Rectified

**PRODUCT:** PORCELAIN TILE

**SIZE:** 60X120

**SIZE:** 21823E

**LINE:** TRAVERTINO NAVONA



| Characteristics                                | Test as per  | Results |
|--|--|---------|
| <b>Physical</b>                                |  |         |
| Water Absorption (%E)                          | ISO 10545-3<br>NBR 13818 - annex: B ( $E \leq 0,5\%$ )               | 0,5     |
| Modulus of Breaking Strength (MPa)             | ISO 10545-4<br>NBR 13818 - annex: C (NBR 15463 Average: $\geq 37$ )  | 37      |
| Breaking Load (N)                              | ISO 10545-4<br>NBR 13818 - annex: C (NBR 15463 Average: $\geq 900$ ) | 1800    |
| Moisture Expansion (mm/m)                      | ISO 10545- 10<br>NBR 13818 - annex: J                                | 0,1     |
| Resistance to Deep Abrasion (mm <sup>3</sup> ) | NA   | NA      |
| Crazing Resistance                             | ISO 10545-11<br>NBR 13818 - annex: F                                 | Resist  |
| Resistance to Thermal Shock                    | ISO 10545-9<br>NBR 13818 - annex: L                                  | Resist  |
| <b>Chemical</b>                                |  |         |
| <b>Resistance to Stains</b>                    |  |         |
| Green staining agent in light oil              |  | 5       |
| Red staining agent in light oil                | ISO 10545-14<br>NBR 13818 - annex: G<br>(Minimum: 3)                 | 5       |
| Iodine   |  | 5       |
| Olive Oil                                      |  | 5       |
| <b>Chemical Resistance</b>                     |  |         |
| Hydrochloric Acid 3% (v/v)                     |  | A       |
| Potassium Hydroxide 30g/L                      |  | A       |
| Citric Acid 100g/L                             |  | A       |
| Lactic Acid 5% (v/v)                           | ISO 10545-13<br>NBR 13818 - annex: H<br>(Minimum: B)                 | A       |
| Hydrochloric Acid 18% (v/v)                    |  | A       |
| Potassium Hydroxide 100g/L                     |  | A       |
| Ammonium Chloride 100g/L                       |  | A       |
| Sodium Hypochloride 20mg/L                     |  | A       |

| Coefficient of Friction |  |     |
|-------------------------|--|-----|
| Dry Surface             | NBR 13818 - annex: N<br>Method: TORTUS III<br>( Value $\geq$ 0,4 ) | 0,5 |
| Wet Surface             |  | 0,4 |
| Wet Surface             | ANSI A137. Section 9.6<br>(Minimum Average Value 0,42)             | 0,4 |

**Local of Use**

Cl - Commercial Light | RE - Residential | FA - Facade

**Recommendation for Application**

For information on application recommendations, refer to the virtual specifier: <http://especificadorvirtual.portobello.com.br>  
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Portobello



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