

# 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  $E_b \leq 0,1\%$

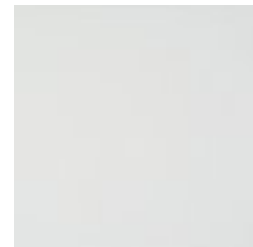
**PRODUCT:** BIANCO TU 60X60 Natural  
Rectified

**TIPOLOGY:** TECHNICAL PORCELAIN TILE

**SIZE:** 60X60

**CODE:** 22320E

**LINE:** PROGETTO



| Characteristics                                | Test as per   | Results |
|--|---|---------|
| <b>Physical</b>                                |   |         |
| Water Absorption (%E)                          | ISO 10545-3<br>NBR 13818 - annex: B ( $E \leq 0,1\%$ )                | 0,1     |
| Modulus of Breaking Strength (MPa)             | ISO 10545-4<br>NBR 13818 - annex: C (NBR 15463 Average: $\geq 45$ )   | 45      |
| Breaking Load (N)                              | ISO 10545-4<br>NBR 13818 - annex: C (NBR 15463 Average: $\geq 1800$ ) | 1800    |
| Moisture Expansion (mm/m)                      | ISO 10545-10<br>NBR 13818 - annex: J                                  | 0,1     |
| Resistance to Deep Abrasion (mm <sup>3</sup> ) | ISO 10545-6<br>NBR 13818 - annex: E ( $\leq 175$ )                    | 175     |
| Crazing Resistance                             | ISO 10545-11<br>NBR 13818 - annex: F                                  | Resist  |
| Frost Resistance                               | ISO 10545-12<br>NBR 13818 - annex: M                                  | NA      |
| 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              | ISO 10545-14<br>NBR 13818 - annex: G<br>(Minimum: 3)                  | 5       |
| Red staining agent in light oil                |   | 5       |
| Olive Oil                                      |   | 5       |
| <b>Chemical Resistance</b>                     |   |         |
| Hydrochloric Acid 3% (v/v)                     | ISO 10545-13<br>NBR 13818 - annex: H<br>(Minimum: B)                  | A       |
| Potassium Hydroxide 30g/L                      |   | A       |
| Citric Acid 100g/L                             |   | A       |
| Lactic Acid 5% (v/v)                           |   | 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 |

## Local of Use

IU - Industrial and Urban | 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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