



## Highveld

**Product Name: Stoneware Porcelain**

**Product Type: Glazed Floor Tiles**

ITEM	TEST METHOD	STANDARD REQUIREMENTS	RESULTS
Product Size	ISO-10545-2		600mm x 1200mm x 10mm
Thickness	ISO-10545-2	±5% (Max 0.45mm)	10±0.3mm
Straightness of Side (mm)	ISO-10545-2	±0.5% (Max 1.5mm)	±0.5mm
Rectangularity (Average)	ISO-10545-2	±0.5% (Max 2.0mm)	±1.5mm
Centre Curvature (mm)	ISO-10545-2	±0.5% (Max 2.0mm)	-0.65mm ~ +1.3mm
Edge Curvature	ISO-10545-2	±0.5% (Max 2.0mm)	-0.5mm ~ +1mm
Warpage (mm)	ISO-10545-2	±0.5% (Max 2.0mm)	0.4mm ~ +0.7mm
Water Absorption %	ISO-10545-3	0.5% < E ≤ 3%	Average: 1.2%
Modulus of Rupture (Mpa)	ISO-10545-4	Average ≥ 30N/MM <sup>2</sup>	Average ≥ 38N/MM <sup>2</sup>
Breaking Strength (N)	ISO-10545-4	Average ≥ 1100N	Average ≥ 1850N
Abrasion Resistance (PEI Rating)	ISO-10545-7	≥ Class 3	Class 4
Linear Thermal Expansion	ISO-10545-8	----	Pass
Resistance to Thermal shock	ISO-10545-9	Resistant	Resistant
Moisture Expansion	ISO-10545-10	----	0.034% (mm/m)
Resistance to Cracking	ISO-10545-11	No Cracking or Flaking	Resistant
Frost Resistance	ISO-10545-12	No Cracking or Flaking	Resistant
Chemical Resistance	ISO-10545-13	Resistant	Resistant
Stain Resistance	ISO-10545-14	≥ Class 3	Class 5
Small Colour Difference	ISO-10545-16	Resistant	Resistant
Slip Resistant	ISO-10545-17	----	R9
Mohs Hardness	BS 6431-13-1986	----	Class 5

### Applications

Product features are with good abrasion resistance and significant scratch hardness. As such, it is indicated for flooring in Public Commercial areas as well for domestic use.



ISO 13006:2018 (E)

**Table 1 - Classification of ceramic tiles with respect to water absorption and shaping**

Shaping	Group I Ev≤3%	Group II a 3%<Ev≤6%	Group II b 6%<Ev≤10%	Group III Ev>10%
<b>A</b> Extruded body	Group A I a Ev≤0.5% [see Annex M]	Group A II a-1 <sup>a</sup> [see Annex B]	Group A II b-1 <sup>a</sup> [see Annex D]	Group A III [see Annex F]
	Group A I b 0.5%<Ev≤3% [see Annex A]	Group A II a-2 <sup>a</sup> [see Annex C]	Group A II b-2 <sup>a</sup> [see Annex E]	
<b>B</b> Dry pressed body	Group B I a Ev≤0.5% [see Annex G]	Group B II a [see Annex J]	Group B II b [see Annex K]	Group B III b [see Annex L]
	Group B I b 0.5%<Ev≤3% [see Annex H]			
<p>A. Groups A II a &amp; A II b are divided into two subgroups [Parts1and2] with different product specifications.            B. Group BIII covers glazed tiles only. There is a low quantity of dry-pressed unglazed tiles produced with water absorption greater than 10% mass fraction, which is not covered by this product group.</p>				

According to the ISO Standard, **Etienne Tiles** Belongs to **Group I**, (BIb), which is Stoneware Porcelain.