

CHARACTERISTIC	LOPO Specification	Reference Standard
<b>Dimensions and surface quality</b>		
Length and width	±1%/max.(L:±1mm;W:±1.5mm)	
Thickness	±10%/max.±1.0mm	
Straightness of sides	±0.5%/max.(L:±2mm;W:±0.5mm)	
Rectangularity	±0.5%/max.±2mm	ISO10545-2
Surface flatness(curvature and warpage)		
<i>Centre</i>	±1%/max.±2.5mm	
<i>Side</i>	±1%/max.±2.5mm	
<i>Warpage</i>	±1%/max.±2.5mm	
<b>Surface quality</b>		
Crack	0	
Scratch	No obvious flaw is visually inspected from a distance of 1.5 metres while the tile is hanging vertically.	
Color differences		
Stains	No obvious flaw is visually inspected from a distance of 1.5 metres while the tile is hanging vertically. Number permitted ≤ 3	ISO10545-2
Striation	No obvious flaw is visually inspected from a distance of 1.5 metres while the tile is laid flat.	
Chipped edge (length/width/thickness)	Front:max.(W≤1mm , T≤1mm , L≤3mm) ; Back:max.(W≤2mm , T≤1mm , L≤5mm)	
Chipped corner (length/thickness)	Front : max.(T≤2mm , L≤2mm) ; Back : max.(T≤2mm , L≤4mm)	
<b>Physical properties</b>		
Water absorption	Average:E≤6%;Individual max.valueE≤6%	ISO10545-3 /AS 4459.3
Density	2.3--2.4g/cm <sup>3</sup>	ISO10545-3 /AS 4459.3
Dry weight	31kg/m <sup>2</sup> (T18mm)	
Compressive strength	Average 81.4MPa and 11.8psi (Vertical Coring)	ASTM C126-13
Impact resistance(Coefficient of restitution)	0.47	AS 4459.5
Modulus of rupture	Average 14.5Mpa	AS 4459.4
Breaking strength <i>Thickness≤18mm</i>	Average≥2700N;Individual max.value≥2100N	ISO10545-4
<i>18mm&lt;Thickness≤30mm</i>	Average≥5400N;Individual max.value≥4500N	ISO10545-4
Frost resistance	No visible damages after 25 changes of freezing and thawing	ISO10545-12
Resistance to thermal shock	Free from defects after 10 cycles	ISO10545-9 /AS 4459.9
Thermal conductivity <i>Thickness≤18mm</i>	≤0.35W/ ( m . K )	ISO10545-8
<i>18mm&lt;Thickness≤30mm</i>	≤0.47W/ ( m . K )	
Moisture expansion	0.007%	ISO10545-10
Wind load	9Kpa	ASTM E330
Linear thermal expansion	5.46x10 <sup>-6</sup> C <sup>-1</sup>	ISO10545-8
<b>Chemical properties</b>		
Resistance to low concentrations of acids and	Not lower than the requirement of ULB	ISO10545-13