

(Following the EN 14411 (ISO 13006) norms and test cases UNI ISO 10545 appendix G for ceramic tiles dry pressed with low water absorption E<0, 5% ground Bla.)

## GLAZED TILES - POLISHED (PGVT) Technical Specification

CHARACTERISTIC	STANDARD AS PER ISO-13006:2018 / EN14411 Gr. Bla	REAL VALUE	METHOD OF TESTING	REMARK
<b>REGULATORY PROPERTIES</b>				
Deviation in length & width	± 0.30 % (±1.00 mm)	± 0.1%	ISO-10545-2	Passed The Test
Deviation in thickness	± 5.0% (± 0.50 mm.)	± 4.0%	ISO-10545-2	Passed The Test
Straightness in sides	± 0.30 % (±0.80 mm)	± 0.1%	ISO-10545-2	Passed The Test
Rectangularity	± 0.30 % (±1.50 mm)	± 0.1%	ISO-10545-2	Passed The Test
Surface flatness Central Curvature	± 0.40% (±1.80 mm)	± 0.2%	ISO-10545-2	Passed The Test
Surface Flatness Edge Curvature	± 0.40% (±1.80 mm)	± 0.2%	ISO-10545-2	Passed The Test
Surface Flatness Warpage	± 0.40% (±1.80 mm)	± 0.2%	ISO-10545-2	Passed The Test
Surface quality	>95% defect free	> 95% defects free	ISO 10545-2	Passed The Test
Small Color Difference (For Plain Colour)	$\Delta E < 100$	$\Delta E < 0.80$	ISO 10545-16	Passed The Test
Glossiness	> 90	> 92	Gloss meter 60°	Passed The Test
<b>STRUCTURAL PROPERTIES</b>				
Water absorption	< 0.50%	< 0.080 %	ISO-10545-3	Passed The Test
Apparent density	As Per Manufacture	>2.28 gm/cc	ISO-10545-3	Passed The Test
<b>MASSIVE MECHANICAL PROPERTIES</b>				
Modulus of rupture > 7.5 mm	Min 35.0 N /mm'	Min 45.0 N /mm'	ISO-10545-4	Passed The Test
Breaking strength Thickness >7.5 mm (12 mm)	Min 1300 N	> 1800 N	ISO-10545-4	Passed The Test
Breaking strength Thickness >7.5 mm (20 mm)	Min 1300 N	Min 7500.0 N	ISO-10545-4	Passed The Test
<b>SURFACE MECHANICAL PROPERTIES</b>				
MOH'S Hardness	As Per Manufacture	Min 4	BS EN 15771	Passed The Test
Surface abrasion resistance	As Per Manufacture	Min 3	ISO-10545-7	Passed The Test
<b>THERMO HYGROMETRIC PROPERTIES</b>				
Moisture expansion	Max 0.06% (0.6 mm/m)	Max 0.02 mm/m	ISO-10545-10	Passed The Test
Thermal expansion (COE) at 100° C	As Per Manufacture	Max 6.0 x 10-6	ISO-10545-8	Passed The Test
Thermal Shock Resistance	Min 10 Cycle	Min 10 Cycle	ISO-10545-9	Passed The Test
Impact Resistance(COR) #	Min 0.55	Min 0.55	ISO-10545-5	Passed The Test
Frost Resistance	As Per Manufacture	Frost Required	ISO-10545-12	Passed The Test
Crazing resistance 7.5 bar	4 Cycle	Pass	ISO-10545-11	Passed The Test
<b>CHEMICAL PROPERTIES</b>				
Resistance to staining	Min Class 3	Min Class 4	ISO-10545-14	Resistance to Stain
Resistance to Household Chemical & Swimming Pool	Min Class GB	Min Class GB	ISO-10545-13	Confirmed to Class GB
Resistance to Low Concentrate Acid and Alkalis	As Per Manufacture	Min Class GLB***	ISO-10545-13	Confirmed to Class GLB
Resistance to High Concentrate Acid and Alkalis	As Per Manufacture	Min Class GHB***	ISO-10545-13	Confirmed to GHB
Safety Properties Skid Resistance - (DCOF-WET PENDULUM)	As Per Manufacture	-	BS 7976-2	Passed The Test
Slip Resistance - (DCOF - R Value)	As Per Manufacture	R10 - R11	DIN 51130	
Lead and Cadmium release (Lead Concentration)	As Per Manufacture	Does not yield	ISO-10545-15	Does not yield
Lead and Cadmium release (Cadmium Concentration)	As Per Manufacture	Does not yield	ISO-10545-15	Does not yield

<div> <div> SINCE 1990 <div> <div>REAL</div> <div>GRANITO</div> </div> </div> <div> <div>Technical Specification</div> <div>(Following the EN 14411 (ISO 13006) norms and test cases UNI ISO 10545 appendix G for ceramic tiles dry pressed with low water absorption E&lt;0, 5% ground Bla.)</div> </div> </div>				
GLAZED TILES - HIGH GLOSSY (PGVT)				
CHARACTERISTIC	STANDARD AS PER ISO-13006/EN14411 GROUP Bla	REAL VALUE	METHOD OF TESTING	REMARK
REGULATORY PROPERTIES				
Deviation in length & width	± 0.30 % (±1.00 mm)	± 0.1%	ISO-10545-2	Passed The Test
Deviation in thickness	± 5.0% (+ 0.50 mm.)	± 4.0%	ISO-10545-2	Passed The Test
Straightness in sides	± 0.30 % (+0.80 mm)	± 0.1%	ISO-10545-2	Passed The Test
Rectangularity	± 0.30 % (+1.50 mm)	± 0.1%	ISO-10545-2	Passed The Test
Surface flatness Central Curvature	± 0.40% (±1.80 mm)	± 0.2%	ISO-10545-2	Passed The Test
Surface Flatness Edge Curvature	± 0.40% (±1.80 mm)	± 0.2%	ISO-10545-2	Passed The Test
Surface Flatness Warpage	± 0.40% (±1.80 mm)	± 0.2%	ISO-10545-2	Passed The Test
Surface quality	>95% defect free	> 95% defects free	ISO 10545-2	Passed The Test
Small Color Difference (For Plain Colour)	ΔE <100	ΔE <0.80	ISO 10545-16	Passed The Test
Glossiness	> 90	> 97	Gloss meter 60°	Passed The Test
STRUCTURAL PROPERTIES				
Water absorption	≤ 0.50%	≤ 0.080 %	ISO-10545-3	Passed The Test
Apparent density	As Per Manufacture	>2.28 gm/cc	ISO-10545-3	Passed The Test
MASSIVE MECHANICAL PROPERTIES				
Modulus of rupture > 7.5 mm	Min 35.0 N /mm'	Min 45.0 N /mm'	ISO-10545-4	Passed The Test
Breaking strength Thickness >7.5 mm (12 mm)	Min 1300 N	> 1800 N	ISO-10545-4	Passed The Test
Breaking strength Thickness >7.5 mm (20 mm)	Min 1300 N	Min 7500.0 N	ISO-10545-4	Passed The Test
SURFACE MECHANICAL PROPERTIES				
MOH'S Hardness	As Per Manufacture	Min 4	BS EN 15771	Passed The Test
Surface abrasion resistance	As Per Manufacture	Min 3	ISO-10545-7	Passed The Test
THERMO HYGROMRTRIC PROPERTIES				
Moisture expansion	Max 0.06% (0.6 mm/m)	Max 0.02 mm/m	ISO-10545-10	Passed The Test
Thermal expansion (COE) at 100° C	As Per Manufacture	Max 6.0 x 10-6	ISO-10545-8	Passed The Test
Thermal Shock Resistance	Min 10 Cycle	Min 10 Cycle	ISO-10545-9	Passed The Test
Impact Resistance(COR) #	Min 0.55	Min 0.55	ISO-10545-5	Passed The Test
Frost Resistance	As Per Manufacture	Frost Rquirment	ISO-10545-12	Passed The Test
Crazing resistance 7.5 bar	4 Cycle	Pass	ISO-10545-11	Passed The Test
CHEMICAL PROPERTIES				
Resistance to staining	Min Class 3	Min Class 4	ISO-10545-14	Resistance to Stain
Resistance to Household Chemical & Swimming Pool	Min Class GB	Min Class GB	ISO-10545-13	Confirmed to Class GB
Resistance to Low Concentrate Acid and Alkalis	As Per Manufacture	Min Class GLB***	ISO-10545-13	Confirmed to Class GLB
Resistance to High Concentrate Acid and Alkalis	As Per Manufacture	Min Class GHB***	ISO-10545-13	Confirmed to GHB
Safety Properties Skid Resistance - (DCOF-WET PENDULUM)	As Per Manufacture	-	BS 7976-2	Passed The Test
Slip Resistance - (DCOF - R Value)	As Per Manufacture	-	DIN 51130	Passed The Test
Lead and Codmium release (Lead Concentration)	As Per Manufacture	Does not yield	ISO-10545-15	Does not yield
Lead and Codmium release (Codimum Concentration)	As Per Manufacture	Does not yield	ISO-10545-15	Does not yield

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GLAZED TILES - MATT, MATT WITH STRUCTURE, ROCKER (GVT)				
CHARACTERISTIC	STANDARD AS PER ISO-13006/EN14411 GROUP Bla	REAL VALUE	METHOD OF TESTING	REMARK
REGULATORY PROPERTIES				
Deviation in length & width	± 0.30 % (+1.00 mm)	± 0.1%	ISO-10545-2	Passed The Test
Deviation in thickness	± 5.0% (+ 0.50 mm.)	± 4.0%	ISO-10545-2	Passed The Test
Straightness in sides	± 0.30 % (+0.80 mm)	± 0.1%	ISO-10545-2	Passed The Test
Rectangularity	± 0.30 % (+1.50 mm)	± 0.1%	ISO-10545-2	Passed The Test
Surface flatness Central Curvature	± 0.40% (+1.80 mm)	± 0.2%	ISO-10545-2	Passed The Test
Surface Flatness Edge Curvature	± 0.40% (+1.80 mm)	± 0.2%	ISO-10545-2	Passed The Test
Surface Flatness Warpage	± 0.40% (+1.80 mm)	± 0.2%	ISO-10545-2	Passed The Test
Surface quality	>95% defect free	> 95% defects free	ISO 10545-2	Passed The Test
Small Color Difference (For Plain Colour)	AE <100	AE <0.80	ISO 10545-16	Passed The Test
STRUCTURAL PROPERTIES				
Water absorption	≤ 0.50%	≤ 0.080 %	ISO-10545-3	Passed The Test
Apparent density	As Per Manufacture	>2.28 gm/cc	ISO-10545-3	Passed The Test
MASSIVE MECHANICAL PROPERTIES				
Modulus of rupture > 7.5 mm	Min 35.0 N /mm'	Min 45.0 N /mm'	ISO-10545-4	Passed The Test
Breaking strength Thickness >7.5 mm (12 mm)	Min 1300 N	> 1800 N	ISO-10545-4	Passed The Test
Breaking strength Thickness >7.5 mm (20 mm)	Min 1300 N	Min 7500.0 N	ISO-10545-4	Passed The Test
SURFACE MECHANICAL PROPERTIES				
MOH'S Hardness	As Per Manufacture	Min 4	BS EN 15771	Passed The Test
Surface abrasion resistance	As Per Manufacture	Min 4	ISO-10545-7	Passed The Test
THERMAL HYGROMRTRIC PROPERTIES				
Moisture expansion	Max 0.06% (0.6 mm/m)	Max 0.02 mm/m	ISO-10545-10	Passed The Test
Thermal expansion (COE) at 100° C	As Per Manufacture	Max 6.0 x 10-6	ISO-10545-8	Passed The Test
Thermal Shock Resistance	Min 10 Cycle	Min 10 Cycle	ISO-10545-9	Passed The Test
Impact Resistance(COR) #	Min 0.55	Min 0.55	ISO-10545-5	Passed The Test
Frost Resistance	As Per Manufacture	Frost Requirment	ISO-10545-12	Passed The Test
Crazing resistance 7.5 bar	4 Cycle	Pass	ISO-10545-11	Passed The Test
CHEMICAL PROPERTIES				
Resistance to staining	Min Class 3	Min Class 4	ISO-10545-14	Resistance to Stain
Resistance to Household Chemical & Swimming Pool	Min Class GB	Min Class GB	ISO-10545-13	Confirmed to Class GB
Resistance to Low Concentrate Acid and Alkalis	As Per Manufacture	Min Class GLB***	ISO-10545-13	Confirmed to Class GLB
Resistance to High Concentrate Acid and Alkalis	As Per Manufacture	Min Class GHB***	ISO-10545-13	Confirmed to GHB
Safety Properties Skid Resistance - (DCOF-WET PENDULUM)	As Per Manufacture	-	BS 7976-2	Passed The Test
Slip Resistance - (DCOF - R Value)	As Per Manufacture	-	DIN 51130	Passed The Test
Lead and Codmium release (Lead Concentration)	As Per Manufacture	Does not yield	ISO-10545-15	Does not yield
Lead and Codmium release (Codimum Concentration)	As Per Manufacture	Does not yield	ISO-10545-15	Does not yield