

Technical Specification

CHARACTERISTIC	STANDARD AS PER ISO13006:2018/ EN14411 Gr.BIIa	TEST METHOD	STANDARD AS PER IS15622:2017 Gr.BIIa	TEST METHOD	MEAN VALUE OF ELYSIA
Regulatory Properties					
Deviation in length and width	± 0.30 % (± 1.00mm)	ISO 10545-2	± 0.10 %	IS 13630-1	± 0.10 %
Deviation in thickness	± 5.00 % (± 0.50mm)	ISO 10545-2	± 5.00 %	IS 13630-1	± 4.00 %
Straightness in side	± 0.30 % (± 0.80mm)	ISO 10545-2	± 0.10 %	IS 13630-1	± 0.10 %
Rectangularity	± 0.30 % (± 1.50mm)	ISO 10545-2	± 0.10%	IS 13630-1	± 0.10 %
Surface flatness Central Curvature	± 0.40 % (± 1.80mm)	ISO 10545-2	± 0.50 %	IS 13630-1	± 0.10 %
Surface flatness Edge Curvature	± 0.40 % (± 1.80mm)	ISO 10545-2	± 0.50 %	IS 13630-1	± 0.10 %
Surface flatness Warpage	± 0.40 % (± 1.80mm)	ISO 10545-2	± 0.50 %	IS 13630-1	± 0.10 %
Surface Quality	> 95% defects free	ISO 10545-2	> 95% defects free	IS 13630-1	> 95% defects free
Small Color Difference	ΔE < 1.00	ISO 10545-16	N.A.		ΔE < 0.30
Glossiness (With Nano Polished)	As per Mfg.	Gloss Meter 60°	As per Mfg.	Gloss Meter 60°	> 90**
Glossiness (Without Polished)	As per Mfg.	Gloss Meter 60°	As per Mfg.	Gloss Meter 60°	7° < GLOSS < 14**
Glossiness (Satin)	As per Mfg.	Gloss Meter 60°	As per Mfg.	Gloss Meter 60°	15° < GLOSS < 25**
Structural Properties					
Water absorption	≤ 0.50 %	ISO 10545-3	≤ 0.080 %	IS 13630-2	≤ 0.080 %
Bluk Density	As per Mfg.	ISO 10545-3	Min. 2.2 g/cc	IS 13630-2	> 2.28 gm/cc
Massive Mechanical Properties					
Modulus of rupture	Min. 35.0 N/mm ²	ISO 10545-4	Min. 35.0 N/mm ²	IS 13630-6	Min. 40.0 N/mm ²
Breaking strength thickness <7.5	Min. 700.0 N	ISO 10545-4	Min. 700.0 N	IS 13630-6	Min. 1000.0 N
Breaking strength thickness ≥7.5	Min. 1300.0 N	ISO 10545-4	Min. 1300.0 N	IS 13630-6	Min. 1600.0 N
Surface Mechanical Properties					
MOH'S hardness	As per Mfg.	BS EN 15771:2010	Min. 5	IS 13630-13	Min 4**
Deep abrasion resistance	Max. 175 mm ³	ISO 10545-6	Min. Class II	IS 13630-12	Max. 132 mm ³
Thermal Hygrometric Properties					
Moisture expansion	Max. 0.06%(0.6mm/m)	ISO 10545-10	Max. 0.02mm/m	IS 13630-3	Max. 0.02mm/m
Thermal expansion(COE) at 100°C	As per Mfg.	ISO 10545-8	Max. 6.0 x 10 ⁻⁴	IS 13630-4	Max. 6.0 x 10 ⁻⁴
Thermal shock resistance	Min. 10 Cycle	ISO 10545-9	Min. 10 Cycle	IS 13630-5	Min. 10 Cycle
Impact resistance(COR)	Min. 0.55	ISO 10545-5	Min. 0.55	IS 13630-14	Min. 0.55
Frost resistance	As per Mfg.	ISO 10545-12	As per Mfg.	IS 13630-10	Frost Proof
Chemical Properties					
Resistance to Staining Glazed	As per Mfg.	ISO 10545-14	Min. Class 2	IS 13630-8	Min. Class 4/Min. Class 2
Resistance to Household Chemicals &Swimming Pool Salts Glazed	Min. Class UB	ISO 10545-13	As per Mfg.	IS 13630-7	Min. Class UB/Min. Class A
Resistance to Low Concentrate Acidand Alkalis Glazed	As per Mfg.	ISO 10545-13	As per Mfg.	IS 13630-7	Min. Class ULA*/Min. Class A***
Resistance to High Concentrate Acidand Alkalis Glazed	As per Mfg.	ISO 10545-13	As per Mfg.	IS 13630-7	Min. Class UHB*/Min. Class A***
Safety Properties					
Skid resistance Polished(DCOF-DRY)#	As per Mfg.	ANSI/NFSI B101.3-2012	As per Mfg.	As per Mfg.	> 0.30
Skid resistance Satin/Matt(DCOF-DRY)#	As per Mfg.	ANSI/NFSI B101.3-2012	As per Mfg.	As per Mfg.	> 0.40
Slip resistance Satin/Matt(DCOF)(R value)#	As per Mfg.	DIN 51130	As per Mfg.	As per Mfg.	R9 to R13
Fire Resistance	As per Mfg.	N.A.	As per Mfg.	N.A.	Fire Proof

* Glossiness 90% with nano technology

** Without nano technology (Unpolished Vitrified tiles)

*** Except Hydrofluoric Acid & it's compound

Glaze tiles Intended for use on floor

As per customer requirement

