



CHARACTERISTICS	Requirement as per ISO 13006:2018 Gr Bla E < 0.5%	Requirement as per IS 15622:2017 Gr Bla E < 0.08%	MEAN VALUE OF AGL	METHOD OF TESTING
-----------------	--	--	-------------------	-------------------

Regulatory Properties

Deviation In Length & Width	± 0.3%, ± 1.0mm	± 0.1%	<± 0.1%	ISO 10545 Part-2 IS 13630 Part-1
Deviation In Thickness	± 5.0%, ± 0.5mm	± 5.0%	± 4.0%	ISO 10545 Part-2 IS 13630 Part-1
Straightness of Edge	± 0.3%, ± 0.8mm	± 0.1%	<± 0.1%	ISO 10545 Part-2 IS 13630 Part-1
Rectangularity	± 0.3%, ± 1.5mm	± 0.1%	± 0.1%	ISO 10545 Part-2 IS 13630 Part-1
Surface Flatness	± 0.4%, ± 1.8mm	± 0.5%	± 0.2%	ISO 10545 Part-2 IS 13630 Part-1
Surface Quality	Min. 95% of Tiles shall be free from visible defects that would impair the appearance of a major area of the tiles	Min. 95% of Tiles shall be free from visible defects that would impair the appearance of a major area of the tiles	Min. 95% of Tiles shall be free from visible defects that would impair the appearance of a major area of the tiles	ISO 10545 Part-2 IS 13630 Part-1
Glossiness	-	-	90-95 in Glossy surface	Glossmeter

Physical & Thermal Properties

Water Absorption % By Wt.	< 0.5, Ind. 0.6 Max.	< 0.08, Ind. 0.1 Max.	< 0.08%	ISO 10545 Part-3 IS 13630 Part-2
Flexural Strength (MOR) In N/mm ²	Avr. 35, Ind. Min. 32	Avr. 35, Ind. Min. 32	Min. 40 N/mm ²	ISO 10545 Part-4 IS 13630 Part-6
Breaking Strength in N	1300 N Min.	1300 N Min.	Min. 1300 N	ISO 10545 Part-4 IS 13630 Part-6
Bulk Density (gm/cc)	2.0 Min.	2.2 Min.	Min. 2.25	ISO 10545 Part-3 IS 13630 Part-2
Resistance to Surface Abrasion	Manufacturer to State Class	PEI II Min.	PEI III Min.	ISO 10545 Part-7 IS 13630 Part-11
Co-efficient of Linear Thermal Expansion from ambient temp to 100°C (K-1)	9x10 ⁻⁶ Max.	6x10 ⁻⁶ Max.	< 6x10 ⁻⁶	ISO 10545 Part-8 IS 13630 Part-4
Thermal Shock Resistance	10 Cycles Min.	10 Cycles Min.	No Damage after 10 Cycles min.	ISO 10545 Part-9 IS 13630 Part-5
Moisture Expansion in mm/M	Test Method Available	0.02 Max.	Nil	ISO 10545 Part-10 IS 13630 Part-3
Crazing Resistance	Required	4 Cycles at 7.5 bar Min.	Resistance	ISO 10545 Part-11 IS 13630 Part-9
Frost Resistance	Resistance	Resistance	Resistance	ISO 10545 Part-12 IS 13630 Part-10
Moh'S Scratch Hardness	Min. 5	Min. 5	Min. 5	EN 101/IS 13630 Part-13

Chemical Properties

Resistance To House hold Chemicals	No Damage	Min. Class AA	Class AA	ISO 10545 Part-13 IS 13630 Part-8
Resistance To Acids & Alkalis (Except HF Acid)	No Damage	Min. Class AA	Class AA	ISO 10545 Part-13 IS 13630 Part-8
Stain Resistance	Min. Class 3	Min. Class 1	Resistance	ISO 10545 Part-14 IS 13630 Part-8

PACKING SPECIFICATION

Size (mm)	Thickness (mm)	No. of Tiles / Set	Area Sq. mtr./ Box
1200x1800mm	9 mm	2 pcs.	4.32m ²
800x1600mm	9 mm	2 pcs.	2.56m ²
800x3000mm	15 mm	1 pcs.	2.40m ²
800x2400mm	15 mm	1 pcs.	1.92m ²



CHARACTERISTIC	STANDARD AS PER ISO13006:2018/ EN14411 Gr.BIa	STANDARD AS PER IS 15622:2017 Gr.BIa	MEAN VALUE OF AGL	METHOD OF TESTING
Regulatory Properties				
Deviation in Length and Width	±0.30 % (±1.00 mm)	±0.10 %	± 0.10 %	ISO 10545-2/IS 13630-1
Deviation in Thickness	±5.0 % (± 0.50 mm)	±5.0 %	± 5.0 %	ISO 10545-2/IS 13630-1
Straightness in Side	±0.30 % (± 0.80 mm)	±0.10 %	± 0.10 %	ISO 10545-2/IS 13630-1
Rectangularity	±0.30 % (±1.50 mm)	±0.10%	± 0.10 %	ISO 10545-2/IS 13630-1
Surface Flatness Central Curvature	±0.40 % (± 1.80 mm)	±0.50 %	± 0.20 %	ISO 10545-2/IS 13630-1
Surface Flatness Edge Curvature	±0.40 % (± 1.80 mm)	±0.50 %	± 0.20 %	ISO 10545-2/IS 13630-1
Surface Flatness Warpage	±0.40 % (± 1.80 mm)	±0.50 %	± 0.10 %	ISO 10545-2/IS 13630-1
Surface Quality	>95% defects free	>95% defects free	>95% defects free	ISO 10545-2/IS 13630-1
Small Color Difference (For Plain Colour)	ΔE <1.00	N.A.	ΔE <0.80	ISO 10545-16
Glossiness (Polished)	As per Manufacturer	As per Manufacturer	≥ 90	Gloss Meter 60°
Glossiness (Satin)	As per Manufacturer	As per Manufacture	7 ≤ Gloss Value ≤ 25	Gloss Meter 60°

Structural Properties				
Water Absorption	≤0.50 %	≤0.080 %	≤0.080 %	ISO 10545-3/IS 13630-2
Bulk Density	As per Manufacturer	Min 2.20 g/cc	> 2.25 gm/cc	ISO 10545-3/IS 13630-2

Massive Mechanical Properties				
Modulus of Rupture	Min. 35.0 N/mm ²	Min. 35.0 N/mm ²	Min. 40.0 N/mm ²	SO 10545-4/IS 13630-6
Breaking Strength Thickness ≥7.5 mm	Min 1300.0 N	Min 1300.0 N	Min 6000.0 N	ISO 10545-4/IS 13630-6

Surface Mechanical Properties				
Mohs Hardness #	As per Manufacturer	Min. 5	Polished Min 4**/ Satin & Posh Min 6	BS EN 15771/IS 13630-13
Surface Abrasion Resistance #	As per Manufacturer	Min. Class II	Polished Min II**/ Satin & Posh Min III	ISO 10545-7/IS 13630-11

Thermal Hygrometric Properties				
Moisture Expansion	Max 0.06% (0.6 mm/m)	Max 0.02 mm/m	Max 0.02 mm/m	ISO 10545-10/IS 13630-3
Thermal Expansion(COE) at 100°C	As per Manufacturer	Max. 6.0 x 10 ⁻⁶	Max. 6.0 x 10 ⁻⁶	ISO 10545-8/IS 13630-4
Thermal Shock Resistance	Min 10 Cycle	Min 10 Cycle	Min 10 Cycle	ISO 10545-9/IS 13630-5
Impact Resistance(COR) #	Min. 0.55	Min 0.55	Min 0.55	ISO 10545-5/IS 13630-14
Frost Resistance	As per Manufacturer	As per Manufacturer	Frost Proof	ISO 10545-12/IS 13630-10
Crazing Resistance at 7.5 bar	4 Cycle	4 Cycle	4 Cycle	ISO 10545-11/IS 13630-9

Chemical Properties				
Resistance to Staining Glazed	Min. Class 3	Min Class 1	Min. Class 3/Min. Class 1	ISO 10545-14/IS 13630-8
Resistance to Household Chemicals & Swimming Pool Salts Glazed	Min Class GB	Min Class AA	Min Class GB/Min Class AA	ISO 10545-13/IS 13630-8
Resistance to Low Concentrate Acid and Alkalis Glazed	As per Manufacturer	As per Manufacturer	Min Class GLB***/ Min Class A***	ISO-10545-13/IS 13630-8
Resistance to High Concentrate Acid and Alkalis Glazed	As per Manufacturer	As per Manufacturer	Min Class GHB***/ Min Class A***	ISO-10545-13/IS 13630-8

Safety Properties				
Skid Resistance - (DCOF-WET PENDULUM)##	As per Manufacturer	As per Manufacturer	Glossy ≥P0,Satin, Posh ≥P1	BS 7976-2
Slip Resistance -Satin/Posh (DCOF- R Value)##	As per Manufacturer	As per Manufacturer	R9 to R10	DIN 51130
Lead and Cadmium release	As per Manufacturer	N.A.	Does not yield Pb & Cd	ISO-10545-15

* Whichever is Lower | ** With nano technology (Polished Vitrifed tiles) Depending on Application area (low or high intensity of traffic)
*** Except Hydrofluoric Acid & it's compound | # Tiles Intended for use on floor | ## For floor tiles, as per customer requirement

PACKING SPECIFICATION

Size (mm)	Thickness (mm)	No. of Tiles / Set	Area Sq. mtr./ Box
800x1600mm	9 mm	2 pcs.	2.56m ²
800x3000mm	15 mm	1 pcs.	2.40m ²
800x2400mm	15 mm	1 pcs.	1.92m ²