

TECHNICAL SPECIFICATIONS Ceramic Tiles

Packing Details			
Size (In mm.)	No. of Tiles Per Carton	Covered Area Per Carton	
		(In Sq. Mtr.)	(In Sq. Ft.)
600x600 (HSK)	4	1.44	15.5
395x395 (HSK)	8	1.25	13.45
300x300 (HSK)	15	1.35	14.5

As Per Indian Standards (IS 15622:2017) Group B IIa				
Characteristics	Testing Methods	Required as per IS 15622:2017 3 < E ≤ 6 % (Group B II a)		OBL Norms
		Unrectified	Rectified	
Dimension & Surface Quality	IS 13630 Part 1/ ISO 10545-2	± 0.4 %	± 0.1 %	Conforms
Deviation in Length & Width		± 5.0 %		±4.0%
Deviation in Thickness		± 0.3 %	± 0.1 %	Conforms
Straightness of Sides		± 0.3 %	± 0.1 %	Conforms
Rectangularity		± 0.5 %		± 0.3 %
Surface Flatness		Min. 95 % tiles should be free from visible defects		Conforms
Surface Quality				
Physical Properties				
Water Absorption	IS 13630 Part 2/ ISO 10545-3	Avg 3 < E ≤ 6, Individual Max,6.2		5-6%
Modulus of Rupture in [N/mm ²]	IS 13630 Part 6/ ISO 10545-4	Avg 22, Individual 20, Min		>28
Breaking Strength in N		< 7.5 mm thickness: 600, Min ≥ 7.5 mm thickness: 1000, Min		>1000
Moisture Expansion in mm/m	IS 13630 Part 3	0.03, Max		0.02
Scratch Hardness of Surface (Mohs)	IS 13630 Part 13	4, Min		Min 5
Resistance to Surface Abrasion of glazed tiles (Class I to V)	IS 13630 Part 11/ ISO 10545-7	Class II, Min		PEI Class 3-5 (depending on surface)
Co-efficient of Linear Thermal Expansion from ambient temperature to 100°C	IS 13630 Part 4/ ISO 10545-8	9x10 ⁻⁶ K ⁻¹ ,Max		Conforms
Thermal Shock Resistance	IS 13630 Part 5	10 cycles, Min		Passed
Crazing Resistance	IS 13630 Part 9/ ISO 10545-9	4 Cycles@7.5 bar, Min		Passed
Frost Resistance	IS 13630 Part 10	Required, if agreed		NA
Impact resistance- Coefficient of restitution	IS 13630 Part 14	0.55, Min		Conforms
Chemical Properties				
Stain Resistance	IS 13630 Part 8/ ISO 10545-13 and ISO 10545-14	Class I, Min		Conforms
Resistance to household chemicals		Class AA, Min		Conforms
Resistance to acids and alkalis (with exception of hydrofluoric acid and its compounds)		Required, if agreed		Min Class AA

TECHNICAL SPECIFICATIONS Anti Skid Tiles

Packing Details

Size (In mm.)	No. of Tiles Per Carton	Covered Area Per Carton	
		(In Sq. Mtr.)	(In Sq. Ft.)
295x295 (HSK)	10	0.87	9.36

As Per Indian Standards (IS 15622:2017) Group B IIa

Characteristics	Testing Methods	Required as per IS 15622:2017 3 < E ≤ 6 % (Group B II a)		OBL Norms
		Unrectified	Rectified	
Dimension & Surface Quality	IS 13630 Part 1/ ISO 10545-2	Unrectified	Rectified	
Deviation in Length & Width		± 0.4 %	± 0.1 %	Conforms
Deviation in Thickness		± 5.0 %		± 4.0%
Straightness of Sides		± 0.3 %	± 0.1 %	Conforms
Rectangularity		± 0.3 %	± 0.1 %	Conforms
Surface Flatness		± 0.5 %		± 0.3 %
Surface Quality		Min. 95 % tiles should be free from visible defects		Conforms
Physical Properties				
Water Absorption	IS 13630 Part 2/ ISO 10545-3	Avg 3 < E ≤ 6, Individual Max, 6.2		5-6%
Modulus of Rupture in [N/mm ²]	IS 13630 Part 6/ ISO 10545-4	Avg 22, Individual 20, Min		>28
Breaking Strength in N		< 7.5 mm thickness: 600, Min ≥ 7.5 mm thickness: 1000, Min		>1000
Moisture Expansion in mm/m	IS 13630 Part 3	0.03, Max		0.02
Scratch Hardness of Surface (Mohs)	IS 13630 Part 13	4, Min		Min 5
Resistance to Surface Abrasion of glazed tiles (Class I to V)	IS 13630 Part 11/ ISO 10545-7	Class II, Min		PEI Class 3-5 (depending on surface)
Co-efficient of Linear Thermal Expansion from ambient temperature to 100°C	IS 13630 Part 4/ ISO 10545-8	9x10 ⁻⁶ K ⁻¹ , Max		Conforms
Thermal Shock Resistance	IS 13630 Part 5	10 cycles, Min		Passed
Crazing Resistance	IS 13630 Part 9/ ISO 10545-9	4 Cycles@7.5 bar, Min		Passed
Frost Resistance	IS 13630 Part 10	Required, if agreed		NA
Impact resistance- Coefficient of restitution	IS 13630 Part 14	0.55, Min		Conforms
Chemical Properties				
Stain Resistance	IS 13630 Part 8/ ISO 10545-13 and ISO 10545-14	Class I, Min		Conforms
Resistance to household chemicals		Class AA, Min		Conforms
Resistance to acids and alkalis (with exception of hydrofluoric acid and its compounds)		Required, if agreed		Min Class AA

TECHNICAL SPECIFICATIONS Vitreous Parking Tiles



Packing Details

Size (In mm.)	No. of Tiles Per Carton	Covered Area Per Carton	
		(In Sq. Mtr.)	(In Sq. Ft.)
300x300	10	0.9	9.68

As per ISO 13006:2012 (Group B Ia) and as IS 15627:2017 (Group B Ib)

Characteristics	Testing Methods	Required as per ISO 13006 $E \leq 0.5$ (Group B Ia)	Required as per IS 15622:2017 $0.08 < E \leq 3$ % (Group B Ib)		OBL Values
			Unrectified	Rectified	
Dimension & Surface Quality					
Deviation in Length & Width	IS 13630 (Part 1):2006	± 0.60 %	± 0.4 %	± 0.1 %	± 0.10 %
Deviation in Thickness		± 5.0 %	± 5.0 %		± 4.0 %
Straightness of Sides		± 0.5 %	± 0.3 %	± 0.1 %	± 0.10 %
Rectangularity		± 0.6 %	± 0.3 %	± 0.1 %	± 0.10 %
Surface Flatness		± 0.5 %	± 0.5 %		± 0.2 %
Surface Quality		Min. 95 % tiles should be free from visible defects	Min. 95 % tiles should be free from visible defects		Conforms
Physical Properties					
Water Absorption	IS 13630 (Part 2):2006	Avg ≤ 0.5 %, Individual 0.6 max	Avg $0.08 < E \leq 3$, Individual 3.3, Max		Av < 3%
Modulus of Rupture in [N/mm ²]	IS 13630 (Part 6):2006	Avg 35, Individual 32, Min	Avg 30, Individual 27, Min		> 35
Breaking Strength in N	IS 13630 (Part 6):2006	1300	< 7.5 mm thickness: 700, Min ≥ 7.5 mm thickness: 1100, Min		1500 Min
Moisture Expansion in mm/m	IS 13630 (Part 3):2006	Test Method Available	0.02, Max		Conforms
Scratch Hardness of Surface (Mohs)	IS 13630 (Part 13):2006	N.A	5, Min		5-8 depends on surface
Resistance to Surface Abrasion of glazed tiles (Class I to V)	IS 13630 (Part 11):2006	Report Abrasion Class & Cycle Passed	Class II, Min		3-5 as per design/surface
Co-efficient of Linear Thermal Expansion from ambient temperature to 100°C	IS 13630 (Part 4):2006	Test Method Available	$7 \times 10^{-6} K^{-1}$, Max		Conforms
Thermal Shock Resistance	IS 13630 (Part 5):2006	Test Method Available	10 cycles, Min		Passed
Crazing Resistance	IS 13630 (Part 9):2006	Required	4 Cycles@7.5 bar, Min		Passed
Frost Resistance	IS 13630 (Part 10):2006	Required	Required		Resistance
Impact resistance- Coefficient of restitution	IS 13630 (Part 14):2006	N.A	0.55, Min		Conforms
Chemical Properties					
Stain Resistance	IS 13630 (Part 8):2006	Test Method Available	Class I, Min		Min. Class-1
Resistance to household chemicals		Min.UB	Class AA, Min		Min. Class-AA
Resistance to acids and alkalis (with exception of hydrofluoric acid and its compounds)		Test Method Available	Required, if agreed		Required, if agreed

NOTE: Certain amount of Size and Shade variation is inherent in all ceramic products. Within the limits of printed material, the colors and aesthetics of the products correspond closely to those of illustrated products. Prospective customers are advised to inspect a sample of the tile before ordering and laying. At all points of time, the company liability is restricted to the purchase value of tiles.

Every effort has been made to ensure the accuracy of the information given. However, the company reserves the right to delete & change, any of the items, colors, sizes & technical specifications without any prior notice.