

# Technical Specifications

SR.NO	Test Conducted	Test Results	Remarks	
1	Water absorption (% by mass)	Average : 0.17	Based on the results of water absorption the tested tiles conformed to Gr. B Ib (0.08% ≤ 3%) of IS 15622 : 2006, Further test results were delivered as per requirements of Gr. B Ib	
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2	Modulus Of Rupture (MOR) N/mm² Span Length = 580 mm Average thickness of the tiles measured = 19.81 mm	Average : 39.0 N/MM²	(Gr. B Ib)  Average 38 N/mm² Individual 35 N/mm² Minimum	Passed the test
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3	Breaking Strength (N) Span Length = 580 mm Average thickness of the tiles measured = 19.81 mm	Average : 8090.0 N	(Gr. B Ib)  For thickness > 7.5 mm 1200 N minimum	Passed the test
4	Scratch Hardness Surface (Mohs' scale)	No. 7	(Gr. B Ib) For commercial application 6 minimum, Home application 5 minimum	Passed the test
5	Thermal Shock Resistance	None of the tiles as tested showed any defects on surface at the end of the 10th cycle.	(Gr. B Ib) Tiles specimens should not show any visible defect when subjected to thermal shock resistance test as per test method IS 13630 : 2006 (Part 5) with immersion	Passed the test

6	Bulk Density (gm/cc)	Average : 2.302	IS 13630 (Part 2) : 2006	
7	Co-efficient of Thermal Expansion from ambient Temperature to 100oC	L = 4.4956 (10 K <sup>1</sup> ) B = 4.6883 (10 K <sup>1</sup> )	-----	Passed the test
8	Straightness of Sides (facial sides) The maximum deviation from straightness in percent related to the corresponding work sizes	+ 0.05 % (Max) - 0.08 % (Max)	(Gr. B lb) S > 410 cm <sup>2</sup>  ± 0.1 %	Passed the test
9	Rectangularity The maximum deviation from straightness in percent related to the corresponding work sizes	+ 0.10 % (Max) - 0.10 % (Max)	± 0.1 %	Passed the test
10	Surface Flatness The maximum deviation from flatness in percent			
	(a) Centre of curvature related to diagonal calculated from work size.	+ 0.17 % (Max)	± 0.2 %	Passed the test
	(b) Edge of curvature related to the corresponding work size	+ 0.10 % (Max) - 0.14 % (Max)	± 0.2 %	Passed the test
	(c) Warpage related to the diagonal calculated from the Work Size	+ 0.09 % (Max) - 0.06 % (Max)	± 0.2 %	Passed the test
SR.NO	Test Conducted	Test Results	Test Requirements As per IS 15622 : 2006	Remarks
11	Chemical resistance  Five test specimens were treated with following solns.			
	(a) Centre of curvature related to diagonal calculated from work size.	+ 0.17 % (Max)	± 0.2 %	Passed the test
	(b) Edge of curvature related to the corresponding work size	+ 0.10 % (Max)- 0.14 % (Max)	± 0.2 %	Passed the test
	(c) Warpage related to the diagonal calculated from the Work Size	+ 0.09 % (Max)- 0.06 % (Max)	± 0.2 %	Passed the test

SR.NO	Test Conducted	Test Results	Test Method
12	Skid Resistance / Surface Slip Resistance		As per ISO 10545 Part - 17
	(a) Condition of Test Surface : Tile Surface was cleaned thoroughly be wet cloth followed by dry cloth and ensured that the surface is completely clean and dryt the time of testing.		
	b) Direction of Test	Coefficient of friction $\mu$	
	1) Parallel to sides (4 Measurements)	1) 0.83	
		2) 0.78	
		3) 0.77	
		4) 0.79	
	2) Diagonal to sides (4 Measurements)	5) 0.76	
		6) 0.75	
		7) 0.76	
8) 0.76			

	Five test specimens were treated with following solns.			
	<b>1. Household Chemicals</b>			
	a) Ammonium Chloride soln. (100 gm/l)	No visual changes observed after immersion for 6 hrs., pencil lines removed with soft dry cloth.	" Class - AA " min.	Conformed to "Class-AA"
	b) Standard cleaning Agent soln., (as per procedure)	No visual changes observed after immersion for 6 hrs., pencil lines removed with soft dry cloth.	" Class - AA " min.	Conformed to "Class-AA"
	<b>2. Swimming pool salts</b>			
	a) Sodium Hypochlorite Soln. (20 mg / l)	No visual changes observed after immersion for 6 hrs., pencil lines removed with soft dry cloth.	" Class - AA " min.	Conformed to "Class-AA"
	b) Copper Sulphate Soln. (20 mg / l)	No visual changes observed after immersion for 6 hrs., pencil lines removed with soft dry cloth.	" Class - AA " min.	Conformed to "Class-AA"
	<b>3. Acids</b>			
	a) Hydrochloric acid Soln. 3 % (v/v)	No visual changes observed after immersion for 6 hrs., pencil lines removed with soft dry cloth.	-----	Conformed to "Class-AA"
	b) Citric acid Soln. (200 mg / l)	No visual changes observed after immersion for 6 hrs., pencil lines removed with soft dry cloth.	-----	Conformed to "Class-AA"
	<b>4. Alkali</b>			
	Potassium hydroxide soln., (200 mg / l)	No visual changes observed after immersion for 6 hrs., pencil lines removed with soft dry cloth.	-----	Conformed to "Class-AA"