

Specifications and Standards

S. No.	Property	Unit	IS 12406-2003 (Plain)		IS 14587-1993 (Pre-laminated)	
			DWR (Grade I)	DIR (Grade II)	DWR (Grade I)	DIR (Grade II)
1	Density	Kg/m ³	600-900	600-900	--	--
2	Variation from mean density	%	±10	±10	±10	±10
3	Moisture Content	%	5-10	5-10	--	--
4	Variation from Moisture Content (absolute)	%	±3	±3	--	--
5	Thickness Swelling 2 hrs (Maximum)	%	--	--	4	7
6	Water absorption (maximum)	%				
	a. After 2 hr soaking		6	9	6	9
	b. After 24 hr soaking				12	18
	i. Up to and including 6mm thick		30	45		
	ii. 7 to 12mm thick		20	30		
	iii. 13 to 19mm thick		13	20		
iv. 20mm and above thick	12	18				
7	Linear expansion (maximum)	%				
	a. Due to general absorption (in thickness) 24 hrs soaking					
	i. Thickness		7	10		
	ii. Length		0.3	0.4	-	-
	iii. Width		0.3	0.4	-	-
b. Due to surface absorption (in thickness) 2 hr			-	-		
8	Modulus of Rupture	N/mm ²				
	a. Up to 20mm thickness					
	i. Average		28	28	28	28
	ii. Minimum individual		25	25	25	25
	b. Above 20mm thickness					
	i. Average		25	25	25	25
ii. Minimum individual	22	22	22	22		
9	Modulus of Elasticity	N/mm ²				
	a. Up to 20mm thickness					
	i. Average		2800	2800	2800	2800
	ii. Minimum individual		2500	2500	2500	2500
	b. Above 20mm thickness					
	i. Average		2500	2500	2500	2500
ii. Minimum individual	2300	2300	2300	2300		
10	Tensile Strength Perpendicular to Surface	N/mm ²				
	a. Up to 20mm thickness					
	i. Average		0.9	0.8	0.9	0.8
	ii. Minimum individual		0.8	0.7	0.8	0.7
	b. Above 20mm thickness					
	i. Average		0.8	0.7	0.8	0.7
ii. Minimum individual	0.7	0.6	0.7	0.6		
11	Tensile Strength Perpendicular to Surface	N/mm ²				
	a. After cyclic test					
	i. Average		0.45	NA	0.45	NA
	ii. Minimum individual		0.40	NA	0.40	NA
	b. After accelerated water resistance test					
	i. Average		0.30	NA	0.30	NA
ii. Minimum individual	0.25	NA	0.25	NA		
12	Screw withdrawal strength (minimum)	N				
	a. Face		1500	1500	1500	1500
	b. Edge (for thickness >12mm)		1250	1250	1250	1250
13	Abrasion Resistance (Minimum) revolutions	Revolutions				
	i. Type – I		NA	NA	1000	1000
	ii. Type – II		NA	NA	450	450
	iii. Type – III		NA	NA	250	250
	iv. Type - IV		NA	NA	75	75