



VIRGO LAMINATES LTD.					5879 & 9996 - NV
TECHNICAL DATA SHEET					12.00mm
PRODUCT TECHNICAL SHEET					
VIRGO COMPACT LAMINATES					
Compact High Pressure Laminates (HPL) as per EN 438-4:2005.					
S. NO.	PROPERTIES	TEST METHOD	UNIT OF MEASUREMENT	ATTRIBUTES OF PERFORMANCE	RESULTS (AS PER EN 438-4)
				EN-438 LAMINATE CLASSIFICATION	
1	SURFACE QUALITY				
1.1	Surface Quality	EN 438-2.4	mm ² /m ²	Spots, dirt and similar surface defects	≤ 1
			mm/m ²	Fibres, hairs, and scratches	≤ 10
2	DIMENSIONAL PROPERTIES				
2.1	Thickness	EN-438-2.5	mm	12.0 ≤ t < 16.0mm : ± 0.60 mm	12.0 ≤ t < 16.0mm : ± 0.28 mm
2.2	Size	EN 438-2.6	mm	Length and Width +10/-0	+ 05 / - 0
2.3	Straightness of edges	EN 438-2.7	mm/m	Straightness of edges ≤ 1.5	≤ 1
2.4	Squareness	EN 438-2.8	mm/m	Squareness ≤ 1.5	≤ 1
2.5	Flatness (measured on full size sheet)	EN 438-2.9	mm/m	For 1.80 ≤ t < 6.00mm : 8	5
			mm/m	For 6.0 ≤ t < 10.00mm : 5	3
			mm/m	10.0 ≤ t : 3	2
3	PHYSICAL PROPERTIES				
3.1	Resistance to Surface Wear	EN 438-2.10	Revolutions	Wear Resistance - Initial Point	Unicolours - ≥ 200 Printed Décor - ≥ 160
			Revolutions	Wear Resistance - Wear Value	Unicolours - ≥ 450 Printed Décor - ≥ 410
3.2	Resistance to immersion in Boiling water	EN 438-2.12	%	Mass Increase - 2 ≤ T < 5 mm	≤ 2
			%	Mass Increase - T ≥ 5 mm	≤ 1
			%	Thickness Increase - 2 ≤ T < 5 mm	≤ 2
			%	Thickness Increase - T ≥ 5 mm	≤ 1.5
			Rating	Appearance - Gloss Finish	≥ 4
			Rating	Appearance - Other Finishes	≥ 5
3.3	Resistance to water vapour	EN 438-2.14	Rating	Appearance - Gloss Finish	≥ 4
			Rating	Appearance - Other Finishes	≥ 5
3.4	Resistance to Dry heat @ 180°C	EN 438-2.16	Rating	Appearance - Gloss Finish	≥ 4
			Rating	Appearance - Other Finishes	≥ 5
3.5	Dimensional stability at elevated temperature	EN-438- 2.17	Longitudinal %	Cumulative dimensional change 2 ≤ T < 5 mm	≤ 0.40
			Transversal %		≤ 0.80
			Longitudinal %	Cumulative dimensional change T ≥ 5 mm	≤ 0.30
			Transversal %		≤ 0.60

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CORPORATE OFFICE :

D-117, Okhla Industrial Area.
Phase-1. New Delhi-110020 (INDIA)
T: +91 11 47422222
F: +91 11 47422299
E: alu@virgolam.com

HEAD OFFICE :

828, Industrial Area, Phase-2,
Chandigarh-160002 (INDIA)
T: +91 172 2639222, 2639333, 4011111
F: +91 172 2639444
E: alu@virgolam.com

WORKS :

Sokhada Village,
Block No. 363, Paiki, N.H.48,
Distt Kheda, Gujrat-387570
P: 9808232222
E: amd.acp@virgoasia.com



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3.6	Resistance to impact by large diameter ball	EN-438- 2.21	min.	Indent dia. 10mm $2 \leq 6$ mm - 1800mm	6
			min.	Indent dia. 10mm $T \geq 6$ mm - 1800mm	4
3.7	Resistance to crazing	EN-438-2.24	Rating	Appearance	≥ 4
3.8	Resistance to Scratching	EN-438-2.25	Rating	Appearance - Smooth Finishes	≥ 2.5
			Rating	Appearance - Textured Finishes	≥ 3.5
3.9	Resistance to Staining	EN-438- 2.26	Rating	Appearance - Group 1 & 2	≥ 5
			Rating	Appearance - Group 3	≥ 4
3.10	Light Fastness (Xenon Arc)	EN-438-2.27	Grey Scale Rating	Contrast	4 to 5
3.11	Resistance to Cigarette burns	EN-438-2.30	Rating	Appearance	≥ 3
3.12	Flexural Modulus	EN-ISO-178-2003	Mpa	Stress ≥ 9000	9000-11500
3.13	Flexural Strength	EN-ISO-178-2003	Mpa	Stress ≥ 80	80-100
3.14	Tensile Strength	EN-ISO-572-2-1996	Mpa	Stress ≥ 60	60-90
3.15	Density	EN-ISO 1183-1:2004	gm/ cm ³	Density 1.35-1.45	1.4 \pm 0.05
4	FIRE PERFORMANCES				
4.1	Fire Reaction Classification - CGS	EN 135 01	Test as per EN 13823 and EN ISO 11925-2 (Small-burner test)		
	Fire Reaction Classification - CGF		Rating	Classification - $T \geq 6$ mm	D - s2, d0
			Rating	Classification - $3 \leq T < 6$ mm	B - s2, d0
		Rating	Classification - $6 \leq T < 13$ mm	B - s1, d0	
5	OTHER PROPERTIES				
5.1	Release of Formaldehyde	EN-438-7.4.11.1	Rating	Classification	E1

Remarks :- 100% Pure Phenolic Products

@ Required Values Based on EN-438 - 4

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