



Greenlam
LAMINATES

Technical Data Sheet - Compact Laminates

TECHNICAL SPECIFICATIONS



S. No.	Properties	Unit	Test method as per EN 438 Part 2 & 4 :2016	Specified Values	Typical Results Greenlam	Specified Values	Typical Results Greenlam	Specified Values	Typical Results Greenlam	Specified Values	Typical Results Greenlam	Specified Values	Typical Results Greenlam	Specified Values	Typical Results Greenlam	Specified Values	Typical Results Greenlam
1	Classification		EN 438-4-4	Compact General purpose standard, CGS													
PHYSICAL & DIMENSIONAL PROPERTIES																	
2	Nominal Thickness	mm		18.0		12.0		10.0		9.0		8.0		6.0		4.0	
3	Thickness	mm	EN 438-2 – 5	18.0 ± 0.70	Complies	12.0 ± 0.50	Complies	10.0 ± 0.50	Complies	9.0 ± 0.50	Complies	8.0 ± 0.50	Complies	6.0 ± 0.40	Complies	4.0 ± 0.30	Complies
4	Length & width	mm	EN 438-2 – 6	+10mm/- Nil	Complies	+10mm/- Nil	Complies	+10mm/- Nil	Complies	+10mm/- Nil	Complies	+10mm/- Nil	Complies	+10mm/- Nil	Complies	+10mm/- Nil	Complies
5	Density	g/cm³	EN ISO 1183 -1:2004	1.35 (min)	1.4	1.35	1.4	1.35	1.4	1.35	1.4	1.35	1.4	1.35	1.39	1.35	1.39
6	Dimensional Stability at Elevated Temperature																
	Longitudinal Direction	%	EN 438-2-17	0.30 (max)	0.06	0.30 (max)	0.08	0.30 (max)	0.1	0.30 (max)	0.11	0.30 (max)	0.12	0.30 (max)	0.16	0.40 (max)	0.28
	Transverse Direction	%		0.60 (max)	0.14	0.60 (max)	0.15	0.60 (max)	0.19	0.60 (max)	0.21	0.60 (max)	0.25	0.60 (max)	0.29	0.80 (max)	0.38
MECHANICAL PROPERTIES																	
7	Resistance to Immersion in Boiling Water (2 hours)																
	Mass Increase	%	EN 438-2-12	2.0 (max)	0.2	2.0 (max)	0.24	2.0 (max)	0.29	2.0 (max)	0.31	2.0 (max)	0.39	2.0 (max)	0.64	2.0 (max)	0.94
	Thickness Increase	%		2.0 (max)	0.6	2.0 (max)	0.68	2.0 (max)	0.78	2.0 (max)	0.84	2.0 (max)	0.95	2.0 (max)	1.12	2.0 (max)	1.48
	Appearance	Rating		Not worse than 4	5	Not worse than 4	5	Not worse than 4	5	Not worse than 4	5	Not worse than 4	5	Not worse than 4	5	Not worse than 4	5
8	Resistance to Impact by Large Diameter Ball																
	Drop Height	mm	EN 438-2-21	1800	1900	1800	1900	1800	1900	1800	1900	1800	1900	1800	1900	1400	1500
	Diameter of Indentation	mm		10 (max)	7	10 (max)	7	10 (max)	8	10 (max)	8	10 (max)	8	10 (max)	8	10 (max)	7
9	Flexural Modulus	Mpa	EN ISO 178:2003	9000(min)	Complies	9000(min)	Complies	9000(min)	Complies	9000(min)	Complies	9000(min)	Complies	9000(min)	Complies	9000(min)	Complies
10	Flexural Strength	Mpa		80 (min)	Complies	80 (min)	Complies	80 (min)	Complies	80 (min)	Complies	80 (min)	Complies	80 (min)	Complies	80 (min)	Complies
11	Resistance to Crazing	Rating	EN 438-2-24	Not worse than 4	5	Not worse than 4	5	Not worse than 4	5	Not worse than 4	5	Not worse than 4	5	Not worse than 4	5	Not worse than 4	5
SURFACE PROPERTIES																	
12	Resistance to Water Vapor	Rating	EN 438-2-14	Not worse than 4	5	Not worse than 4	5	Not worse than 4	5	Not worse than 4	5	Not worse than 4	5	Not worse than 4	5	Not worse than 4	5
13	Resistance to Dry Heat at 160° C	Rating	EN 438-2-16	Not worse than 4	5	Not worse than 4	5	Not worse than 4	5	Not worse than 4	5	Not worse than 4	5	Not worse than 4	5	Not worse than 4	5
14	Resistance to Wet heat @100°C	Rating	EN 438-2-18	Not worse than 4	5	Not worse than 4	5	Not worse than 4	5	Not worse than 4	5	Not worse than 4	5	Not worse than 4	5	Not worse than 4	5
15	Resistance to Surface Wear, IP	Rev.	EN 438-2-10	150 (min)	Complies	150 (min)	Complies	150 (min)	Complies	150 (min)	Complies	150 (min)	Complies	150 (min)	Complies	150 (min)	Complies
16	Resistance to Scratching	N	EN 438-2-25	2.0 (min)	2.5	2.0 (min)	2.5	2.0 (min)	2.5	2.0 (min)	2.5	2.0 (min)	2.5	2.0 (min)	2.5	2.0 (min)	2.5
17	Resistance to staining																
	Group 1 & 2	Rating	EN 438-2-26	5	5	5	5	5	5	5	5	5	5	5	5	5	5
	Group 3	Rating		4	≥ 4	4	≥ 4	4	≥ 4	4	≥ 4	4	≥ 4	4	≥ 4	4	≥ 4
18	Light fastness (Xenon Arc Lamp)- Grey Scale Contrast	Rating	EN 438-2-27	4 to 5	Complies	4 to 5	Complies	4 to 5	Complies	4 to 5	Complies	4 to 5	Complies	4 to 5	Complies	4 to 5	Complies
FIRE PERFORMANCE																	
19	Reaction to Fire	Euroclass	EN 13501-1	D-s2, d0	Complies	C-s2, d0	Complies	C-s2, d0	Complies	D-s2, d0	Complies	D-s2, d0	Complies	D-s2, d0	Complies	D-s2, d0	Complies
20	Calorific Value	MJ/kg	ISO 1716: 2010	19.91 (max)	19.88	19.91 (max)	19.88	19.91 (max)	19.88	19.91 (max)	19.88	19.91 (max)	19.88	19.91 (max)	19.88	19.91 (max)	19.88
HEALTH & ENVIRONMENTAL CHARACTERISTICS																	
21	Food safe	-	EN 13130-1	-	YES	-	YES	-	YES	-	YES	-	YES	-	YES	-	YES
22	Contents' migration as per Food Commission Regulation	Migration	EN 1186-1, 3 & 14: 2002	Migration of Simulants is less than maximum permitted by Regulation													
23	Formaldehyde emission (release)	ppm	EN 16516-2017	0.1	0.02	0.1	0.02	0.1	0.02	0.1	0.02	0.1	0.02	0.1	0.02	0.1	0.02
24	Volatile Organic Compounds (VOC) Emission	Class Certification	ISO 16000-9 UL 2818 - 2013	-	A	-	A	-	A	-	A	-	A	-	A	-	A
25	Anti-bacterial Efficacy & activity																
	% Reduction in 24 hours	%	JIS 2801-2012	95.0 (min)	99.99	95.0 (min)	99.99	95.0 (min)	99.99	95.0 (min)	99.99	95.0 (min)	99.99	95.0 (min)	99.99	95.0 (min)	99.99
	Activity after 24 hours	Log Reduction		2.0 (min)	Exceeds	2.0 (min)	Exceeds	2.0 (min)	Exceeds	2.0 (min)	Exceeds	2.0 (min)	Exceeds	2.0 (min)	Exceeds	2.0 (min)	Exceeds

• Greenlam Compact Laminates can be made available in Fire Retardant, Lab Guardian (Chemical Resistant) and ESD variants.

• Dimensions of the boards offered:

Feet	mm	Feet	mm
4' x 8'	1220 x 2440	5' x 12'	1525 x 3660
4' x 10'	1220 x 3050	6' x 6'	1830 x 1830
4.25' x 10'	1300 x 3050	6' x 8'	1830 x 2440
5' x 6'	1525 x 1830	6' x 12'	1830 x 2660

• Other Sizes & Thicknesses can be offered. Please contact the local for more information and complete range offering

Class (Rating) – 1= Surface damage, 2= Severe appearance alteration, 3= Moderate change, 4= Slight change visible at certain angle, 5= No change

Bacteria tested – 1. Pseudomonas, 2. Enterococcus Faecalis, 3. Candida Albicans 4. Pseudomonas Aeruginosa 5. Escherichia Coli 6. Klebsiella 7. MRSA (Methicillin Resistant Staphylococcus Aureus) 8. Salmonella Enterica

Fungus tested: 1. Aspergillus niger 2. Penicillium funiculosum 3. Gliocladium virens 4. Chaetobium globosum 5. Aurobasidium pullulans

Note: Whereas Greenlam products are manufactured thoroughly to standards, the nature of the application procedure is beyond our control. The values given above are to the best of knowledge but without liability/warranty, expressed or implied.





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