



Greenlam
LAMINATES

Technical Data Sheet

TECHNICAL SPECIFICATIONS



S. NO.	PROPERTIES	Unit	TEST METHOD AS PER EN 438 Part 2 : 2016	SPECIFIED VALUES	TYPICAL GREENLAM
GENERAL					
1	Classification		EN 438-3 Table- 3	HGS	HGS*
DIMENSIONAL PROPERTIES					
2	Surface Quality	mm ² /M ²	EN 438-3-6.3, 5.2.4	1.0 (max)	Complies
3	Fibers, Hairs & Scratches	mm/M ²		10.0 (max)	Complies
4	Thickness & Maximum variation	mm	EN 438-2 – 5	0.70 ± 0.10 0.80 ± 0.10	0.70 ± 0.06 0.80 ± 0.06
5	Length & Width	mm	EN 438-2 – 6	+10mm /-0mm	+5mm /-0mm
6	Flatness	mm/M	EN 438-2 – 9	60.0 (max)	≤ 50
7	Edges Straightness	mm/M	EN 438-2 – 7	1.5 (max)	≤ 1
8	Edges Squareness	mm/M	EN 438-2 – 8	1.5 (max)	Complies
SURFACE PROPERTIES					
9	Resistance to Dry Heat at 160° C	Rating (min.)	EN 438-2 -16	Gloss finish - 3	Complies
10	Resistance to Surface Wear	Revolutions	EN 438-2 - 10	150 (min.) IP	300
11	Resistance to Stains	Group 1 & 2 Group 3	Rating (min.) Appearance	EN 438-2 - 26	5 4 ≥ 4
12	Resistance to Wet Heat at 100°C	Rating (min.)	EN 438-2 - 18	Gloss finish - 3	Complies
13	Resistance to Scratching	Rating	EN 438-2 - 25	5	5
14	Resistance to Microscratches (Surface visual assessment)	Class	EN 438-2 -30	No requirement	5
15	Resistance to Water Vapor, Appearance	Rating	EN 438-2 -14	Gloss finish - 3	Complies
16	Light Fastness (Xenon-Arc Light)	Contrast	EN 438-2 - 27	4 to 5	4
PHYSICAL PROPERTIES					
17	Resistance to Impact by Large Diameter Ball		EN 438-2 – 21		
	a) Drop Height	mm		800 (min.)	1000
	b) Diameter of Indentation	mm		10 (max)	7
18	Resistance to Impact by Small Diameter Ball	Rating	EN 438-2 - 20	20 (min)	Complies
19	Resistance to Immersion in Boiling Water	Rating	EN 438-2 - 12	Gloss finish - 3	Complies
20	Dimensional stability at Elevated temperatures		EN 438-2 - 17		
	Longitudinal	%		0.55 (max.)	Complies
	Transverse	%		1.05 (max.)	Complies
21	Resistance to cracking	Rating	EN 438-2 - 23	4 (min)	5
22	Density	g/cm ³	EN ISO 1183 -1 :2004	1.35 (min.)	1.40
23	Electrostatic Dissipation Property	Ω	EN 61340-4-1	No requirement	1 x 10 ¹⁰ to 10 ¹¹
FIRE PERFORMANCE					
24	Reaction to Fire (Tested according to EN 13823:2010 & EN 11925-2 :2010)*	Euro class	EN 13501-1: 2007+ A1:2009	See foot note on Fire Performance**	
HEALTH AND ENVIRONMENTAL PROPERTIES					
25	Formaldehyde Release	ppm	EN 16516:2017	0.1	0.02
		Certificate	UL-2818:2013	Greenguard Gold	Complies
26	Emissions with respect to Indoor Air Quality:	mg/M ³	UL-2818:2013	0.22	Conforms
	TVOC	ppb ³	Greenguard Gold	7.3	Conforms
	Formaldehyde (CAS 50-00-0 9)	ppm	standards	0.043	Conforms
	Total Aldehydes	μg/M ³		6.5	Conforms
	4-Phenylcyclohexene (CAS 4994-16-5)	μg/M ³		20	Conforms
	Particle Matter less than 10 μm	μg/M ³		160	Conforms
	1-Methyl-2-pyrrolidinone (CAS 872-50-4)	--		1/2 CREL1/100th TLV	Conforms
27	Product sanitization/hygiene	--	NSF/ANSI 35	NEMA Assessment	Conforms
28	Transfer of constituents to Food during contact	Migration of 10 mg/dm ²	EN 1186-1:2002 EN 1186-3:2002 EN 1186-14:2002	3% Acetic Acid 95% Ethanol Iso-Octane	1.0 1.1 Less than 0.1
29	Antiviral Efficacy & Activity	ISO 21702-2019	% Reduction in 2 hrs, % Reduction in 24 hrs. Activity after 24 hours	No Requirement 95.0 (Min.) 2.0 (Min.)	90% (Min.) 99.9% (Min.) Exceeds
30	Antibacterial Efficacy & Activity	JIS 2801-2012	% Reduction in 24 hrs. Activity after 24 hours	95.0 2.0(Min)	99.99 Exceeds
31	Antifungal Efficacy	ASTM G-21-2015	Growth after 28 days	Rating 1	Rating 0 (No Growth)

*HGS – Horizontal General Purpose Standard

Fire test performance will depend on laminate thickness and construction, substrate type and thickness, and adhesive used. It is advised to contact the laminate manufacturer for details of test reports and certifications held. Greenlam can supply type S and F HPLs.

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

Virus tested: MS2 Bacteriophage

Bacteria tested – 1.Pseudomonas. 2. Entrococcus 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 funicollosum 3. Gliocladium virens 4. Chaetobium globosum 5. Aurobasidium pullulans

Note: Greenlam products are manufactured thoroughly to standards. The values given above are to the best of knowledge but without liability/warranty, expressed or implied





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