

PROPERTIES	TEST STANDARD	UNIT	SPECIFIED VALUES	TYPICAL TEST VALUES	SPECIFIED VALUES	TYPICAL TEST VALUES
Classification	EN 438-6-CI. 4: 2016		EXTERIOR, SEVERE USE FLAME RETARDANT GRADE, EDF			
PHYSICAL & DIMENSIONAL PROPERTIES						
Nominal Thickness		mm	6.0		8.0	
Thickness Variation	EN 438-2 - 5	mm	6.0 ± 0.40	6.0 ± 0.30	8.0 ± 0.50	8.0 ± 0.35
Length and width Variation	EN 438-2 - 6	mm	1220 X 2440 +10mm /-0mm	+5mm /-0mm	+10mm /-0mm	+5mm /-0mm
Edges Straightness	EN 438-2 - 7	mm/M	1.5 (max)	≤ 1	1.5 (max)	≤ 1
Edges Squareness	EN 438-2 - 8	mm/M	1.5 (max)	Complies	1.5 (max)	Complies
Flatness	EN 438-2 - 9	mm/M	5.0 (max)	Complies	5.0 (max)	Complies
Density	EN ISO 1183 -1:2004	g/cm ³	1.35	1.38	1.35	1.38
Dimensional Stability at Elevated Temperature	EN 438-2 -17					
Longitudinal Direction		%	0.30 (max.)	0.18	0.30 (max.)	0.17
Transverse Direction		%	0.60 (max)	0.38	0.60 (max)	0.35
MECHANICAL PROPERTIES						
Resistance to wet conditions, Increase in mass	EN 438-2 : 15	%	8.0 (max)	4.1	8.0 (max)	4.0
Surface Rating		Rating	4 (min)	5	4 (min)	5
Edge Rating		Rating	3 (min)	3	3 (min)	3
Resistance to climatic shock	EN 438-2 : 19	Rating	Appearance -4 (min)	4	Appearance -4 (min)	4
		Index	D _s - 0.80 (min)	≥ 0.95	D _s - 0.80 (min)	≥ 0.95
		Index	D _m - 0.80 (min)	≥ 0.95	D _m - 0.80 (min)	≥ 0.95
Resistance to Impact by Large Diameter Ball						
Drop Height	EN 438-2 -22	mm	1800	2000	1800	2000
Diameter of Indentation		mm	10 (max)	7	10 (max)	7
Flexural Strength	EN ISO 178:2003	Mpa	80 (min)	100	80 (min)	100
Flexural Modulus	EN ISO 178:2003	Mpa	9000(min)	10700	9000(min)	10700
Thermal Conductivity	EN 12524:2000	W/M ² K	No requirement	0.24	No requirement	0.24
Resistance to fixing (Screw pull out strength)	ISO 13894-1; 9	N	2000 (min)	≥2000	2000 (min)	≥2000
SURFACE PROPERTIES						
Resistance to UV Light, after 1500 hours exposure	EN 438-2-28	Rating	Grey Scale contrast-3 (min)	3~4	Grey Scale contrast-3 (min)	3~4
			Appearance- 4 (min.)	4~5	Appearance- 4 (min.)	4~5
Resistance to artificial weathering including light fastness, after 650 MJ/M ² Radiant exposure	EN 438-2-29	Rating	Grey Scale contrast-3 (min)	3~4	Grey Scale contrast-3 (min)	3~4
			Appearance- 4 (min.)	4~5	Appearance- 4 (min.)	4~5
FIRE PERFORMANCE						
Reaction to Fire	EN 13501-1	Euro class	B-s2, d0	B-s1, d0	B-s2, d0	B-s1, d0
Calorific Value	ISO 1716: 2010	MJ/kg	19.91 (max)	19.88	19.91 (max)	19.88
HEALTH CHARACTERISTICS						
Anti-bacterial Efficacy & activity	JIS 2801-2012					
% Reduction in 24 hours		%	95.0 (min)	99.99	95.0 (min)	99.99
Activity after 24 hours		Log Reduction	2.0 (min)	Exceeds	2.0 (min)	Exceeds
Anti-Fungal Efficacy	ASTM G-21-2015					
Growth after 28 days		Class	1	0 (No Growth)	1	0 (No Growth)

CLASS (RATING): 1 = Surface Damage; 2 = Severe appearance alteration; 3 = Moderate Change; 4 = Slight change visible from certain angle; 5 = No Change

- Bacteria Tested: 1. Pseudomonas Aeruginosa, 2. Enterococcus Faecalis, 3. Candida Albicans, 4. Pseudomonas Aeruginosa, 5. Escherichia Coli, 6. Klebsiella Pneumoniae, 7. MRSA (Methicillin Resistant Staphylococcus Aureus), 8. Salmonella Enterica
- Fungus Tested: 1. Aspergillus niger, 2. Penicillium funicolosum, 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.