



Sturdo
RESTROOM CUBICLES & LOCKERS



Technical Specifications

SHOWER CUBICLES

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Sr No.	Properties	Unit	Test method as per EN 438 Part 2 & 4 :2016	Specified values	Typical Results Greenlam	Specified values	Typical Results Greenlam
1	Classification		EN 438-4- 4	Compact General purpose standard laminated boards with Phenolic Resin impregnated Core layers, CGS			
PHYSICAL & DIMENSIONAL PROPERTIES							
2	Nominal Thickness	mm		18.0		12.0 /13.0	
3	Thickness	mm	EN 438-2 - 5	18.0 ± 0.70	Complies	12.0 ± 0.50 13.0 ±0.50	Complies
4	Length & width	mm	EN 438-2 - 6	+10mm/ -Nil	Complies	+10mm/ -Nil	Complies
5	Density	g/cm3	EN ISO 1183 -1:2004	1.35 (min)	1.4	1.35	1.4
6	Dimensional Stability at Elevated Temperature						
	Longitudinal Direction	%	EN 438-2 -17	0.30 (max)	0.06	0.30 (max)	0.08
	Transverse Direction	%		0.60 (max)	0.14	0.60 (max)	0.15
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
	Thickness Increase	%		2.0 (max)	0.6	2.0 (max)	0.68
	Appearance	Rating		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
	Diameter of Indentation	mm		10 (max)	7	10 (max)	7
9	Flexural Modulus	mpa	EN ISO 178: 2003	9000(min)	Complies	9000(min)	Complies
10	Flexural Strength	mpa	EN ISO 178: 2003	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

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SURFACE PROPERTIES							
12	Resistance to Water Vapor	Rating	EN 438-2 -14	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
14	Resistance to Wet heat @100°C	Rating	EN 438-2 -18	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
16	Resistance to Scratching	N	EN 438-2 -25	2.0 (min)	2.5	2.0 (min)	2.5
17	Resistance to staining Group 1 & 2 Group 3	Rating	EN 438-2 -26	5	5	5	5
				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
FIRE PERFORMANCE							
19	Reaction to Fire	En 13 501-1	Euro class	D-s2, d0	Complies	D-s2, d0	Complies
20	Calorific Value	ISO 17 16: 2010	MJ/kg	19.91 (max)	19.88	19.91 (max)	19.88
HEALTH & ENVIRONMENTAL CHARACTERISTICS							
21	Food Safe	En 13 130-1	-	-	YES	-	YES
22	Contents' migration as per Food Commission Regulation	En 1186-1, 3 & 14: 2002	Migration	Migration of Simulants is less than maximum permitted by Regulation			
23	Formaldehyde emission (release)	En 165 16-2017	ppm	0.1	0.02	0.1	0.02
24	Volatile Organic Compounds (VOC) Emission	Iso 160 00-9	Class	-	A	-	A
		UI 2818 - 2013	Certification	GREENGUARD GOLD			

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25	Anti-Viral Efficacy & activity	Iso 21702 -2019	MS2 Bacteriophage				
	% Reduction in 24 hours		%	95% (min)	99.9% (min)	95% (min)	99.9% (min)
	Activity after 24 hours		Log Reduction	2.0 (min)	Exceeds	2.0 (min)	Exceeds
	SARS CoV-2						
	% Reduction in 10 minutes		%	No Requirement	90% (Min.)	No Requirement	90% (Min.)
% Reduction in 30 minutes	%	No Requirement	99% (Min.)	No Requirement	99% (Min.)		
26	Anti-Bacterial Efficacy & activity	Jis 2801 -2012					
	% Reduction in 24 hours		%	95.01 (min)	99.99	95.0 (min)	99.99
	Activity after 24 hours		Log Reduction	2.0 (min)	Exceeds	2.0 (min)	Exceeds
27	Anti-Fungus Efficacy	Astm G -21-2015					
	Growth after 28 days		Class	1	0 (No Growth)	1	0 (No Growth)

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.

- Greenlam Compact Laminates can be made available in Fire Retardant, Lab Guardian (Chemical Resistant) and ESD variants.
- Dimensions of the boards offered:

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

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