



TECHNICAL SPECS

PROPERTIES	UNIT	TEST METHOD AS PER DIN EN 438 Part 2 & 3: 2005	SPECIFIED VALUES	GREENLAM TYPICAL VALUE
CLASSIFICATION				
Thickness	mm	EN 438-4-5	13.0 ± 0.60	13.0 ± 0.40
Resistance to Dry Heat at 180° C	Rating	EN 438-2-16	Not worse than 4	5
Resistance to Surface Wear	Rev.	EN 438-2-10	350 (min)	600
Resistance to Immersion in Boiling Water (2 hours)		EN 438-2-12		
a) Mass Increase	%		2.0 (max)	0.20
b) Thickness	%		2.0 (max)	0.70
c) Appearance	Rating		Not worse than 4	5
Dimensional Stability at Elevated Temperature				
		EN 438-2-17		
a) Longitudinal	%		0.30 (max)	0.07
b) Transverse	%		0.60 (max)	0.14
Resistance to Impact by Large Diameter Ball				
a) Drop Height	cm	EN 438-2-21	1800	2500
b) Diameter of Indentation	mm		10 (max)	7
Resistance to Scratching	N	EN 438-2-25	2.0 (min)	4.0
Resistance to Staining				
Group 1 & 2	Rating		5	5
Group 3	Rating	EN 438-2-26	4	≥ 4
Resistance to Cigarette Burns	Rating	EN 438-2-30	Not worse than 3	4
Resistance to Water Soak at 65°C for 48 hours	Rating	IS 2046:1995, Annexure Y	Not worse than 4	5
Resistance to Crazeing	Rating	EN 438-2-24	Not worse than 4	5
Flexural Modulus	Mpa	EN ISO 178:2003	9000 (min)	11000
Flexural Strength	Mpa	EN ISO 178:2003	80 (min)	120
Tensile Strength	Mpa	EN ISO 527-2:1996	60 (min)	90
Density	g/cm ³	EN ISO 1183-1:2004	1.35	1.45
Chemical & Stain Resistance	Conforms to SEFA 8.1-PL-2010; Chemical Spot Test* (Test Report available on request)			

PROPERTIES	UNIT	SPECIFIED VALUES NEMA LD 3-2005	GREENLAM TYPICAL VALUE
Thickness	mm	13.00 +/- 0.60	13.00 +/- 0.40
Appearance		No ABC defects	No ABC defects
Straightness	mm/meter (max)	1.5	1.2
Diagonal Difference	mm (max)	6	3
Flatness (allowable warp)	mm (max)	12	6
Light Resistance	Rating (min)	Slight Effect	Slight Effect
Cleanability	Rating (max)	20	10
Stain			
a) Reagents 1-10	Rating (min)	No Effect	No Effect
b) Reagents 11-15	Rating (min)	Moderate Effect	Slight Effect
Boiling Water Resistance	Rating (min)	No Effect	No Effect
High Temperature Resistance	Rating	Slight Effect	No Effect
Ball Impact Resistance	mm (in) (min)	1900 (75")	2540 (100")
Dimensional Change			
a) Machine Direction	% (max)	0.3	0.15
b) Cross Direction	% (max)	0.7	0.3
Room Temperature Dimensional Stability			
a) Machine Direction	% (max)	0.3	0.1
b) Cross Direction	% (max)	0.7	0.2
Wear Resistance	Cycles (min)	400	600
Scratch Resistance	N (min)	2.5	4.0
Flexural Strength			
a) Machine Direction	Mpa (min) (MD)	124	130
b) Cross Direction	Mpa (min) (CD)	82.7	85
Flexural Modulus			
a) Machine Direction	Mpa (min) (MD)	11000	11500
b) Cross Direction	Mpa (min) (CD)	9650	10000
Tensile Strength			
a) Machine Direction	Mpa (min) (MD)	124	135
b) Cross Direction	Mpa (min) (CD)	82.7	90
Chemical & Stain Resistance	Conforms to SEFA 8.1-PL-2010; Chemical Spot Test* (Test Report available on request)		

GREENLAM LabGuardian CHEMICAL RESISTANT GRADE COMPACT LAMINATES: SIZE AVAILABLE: 5'x12'; THICKNESSES AVAILABLE: 13.0MM, 16.0MM & 20.0MM



TEST RESULTS

LEGEND

Level 0

No detectable change.

Level 1

Slight change in colour or gloss.

Level 2

Slight surface etching or severe staining.

Level 3

Pitting, cratering, swelling, or erosion of coating, obvious and significant deterioration.

Acids	Solvents	Bases	General reagents	Stains & indicators
Level	Level	Level	Level	Level
Aqua Regia: Sulphuric Acid 77%: 65% Nitric Acid(1:1:1)	Acetone	Ammonium Hydroxide 25%	Copper Sulphate 5%	Crystal Violet 0.1%
Chromic Trioxide (Chromic Acid Cleaning Solution) 60%	Amyl Acetate	Sodium Hydroxide 10%	Ethylene Glycol	Gentian Violet 1 %
Formic Acid 90%	Carbon Tetrachloride	Sodium Hydroxide 20%	Ferric Sulphate 5%	Malachite Green 0.1%
Glacial Acetic Acid 99%	Chloroform	Sodium Hydroxide 40%	Gasoline	Methyl Red 0.1%
Hydrochloric Acid 37%	Dimethylformamide	Sodium Hydroxide Flakes	Hydrogen Peroxide 3%	Methylene Blue 0.1%
Hydrofluoric Acid 85%	Ethy Alcohol		Karl Fischer Reagent	Phenolphthalein 0.1%
Nitric Acid 20%	Ethyl Acetate		Kerosene	Thymol Blue 0.1%
Nitric Acid 30%	Formaldehyde 37%		Mineral Oil	
Nitric Acid 65%	Methanol		Potassium Permanganate 0.1%	
Perchloric Acid	Methyl Ethyl Ketone		Silver Nitrite 5%	
Phosphoric Acid 85%	Methylene Chloride		Sodium Hypochloride 5%	
Sulphuric Acid 33%	N-hexane		Trisodium Phosphate 30%	
Sulphuric Acid 77%	Phenol Solution 80%		Urea 5%	
Sulphuric Acid 96%	Tetrahydrofuran		Vegetable Oil (Olive)	
	Toluene		Water	
	Xylene		Zinc Chloride (saturated solution)	