



Greenlam

AFOX

ANTI FINGERPRINT SURFACES



A F X
ANTI FINGERPRINT SURFACES





TRUE BEAUTY STAYS SPOTLESS

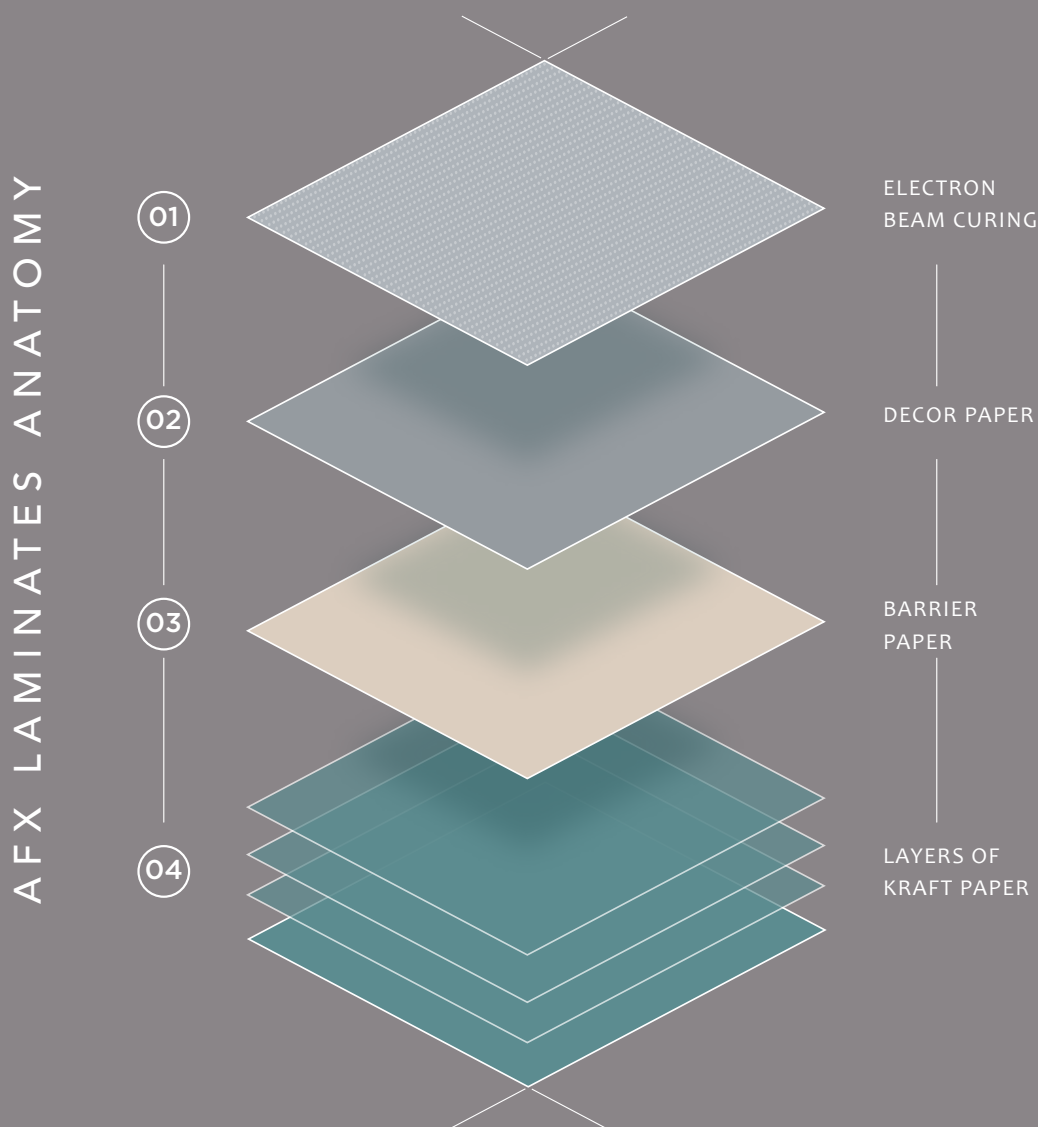
True beauty by nature and design is timeless. Its charm always stays the same. Inspired by this very idea of beauty, Greenlam created a surface that is beautiful enough to leave an indelible mark on its admirers without letting any mark settle on it and ruin its beauty.

The pursuit of creating this unique surface led to the revolutionary Greenlam AFX, the ultra matt compacts and laminates. They look so beautiful you cannot resist touching them. Touch all you want because the craftsmanship that leaves a lasting impression ensures no fingerprint mark spoils their beauty. But there is more to this ultra matt surface than just being fingerprint-resistant. These compacts and laminates are anti-bacterial, anti-virus, hydro, mould, and scratch-resistant too – which means they are easy to maintain. Now that is redefining interior surfaces. And that is what sets Greenlam AFX apart from the rest.

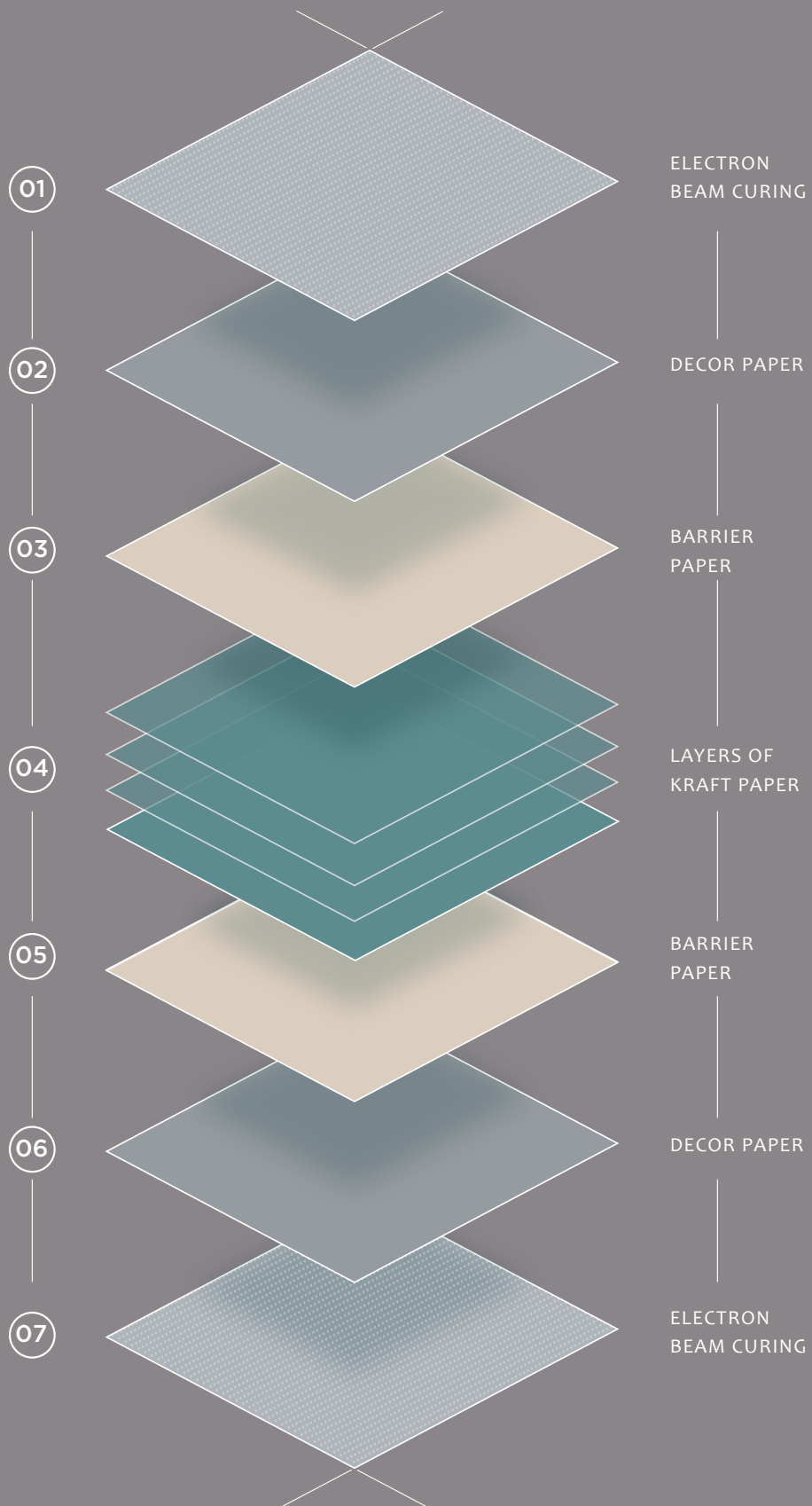
A NEW BENCHMARK IN SURFACE TECHNOLOGY

Much has been said about what makes Greenlam AFX surfaces so impressive. Let's understand the technology behind this super smooth, ultra matt surface. Its state-of-the-art technique of EBC (Electron Beam Curing) ensures the surface is non-porous. The special treated decorative surface is then compressed with kraft paper under high temperature and pressure to create Greenlam AFX. Its non-porous, thermal healing top surface rejects the reflection of light and thus brings you an ultra matt, anti-fingerprint surface.

Take a more detailed look at the construction behind our pioneering new AFX Laminate and Compacts.



AFX COMPACTS ANATOMY



FEATURES THAT MAKE

It's the end of sore sights of fingerprints and wiping the surface clean. Simply relax and admire the beauty of spotless surface for years.



ANTI-FINGERPRINT



SOFT TOUCH



Smooth and silky. It never forgets to trigger a pleasant feeling every time you touch the surface.



EASY TO CLEAN



No more breaking sweat on cleaning. Just a soft sponge and water are enough for a squeaky-clean surface. (No hard cleaning agents should be used).

Designed to effectively protect the surface from water spills and moisture from spoiling its beauty.



HYDRO-RESISTANCE

T H E D I F F E R E N C E

Not just beautiful surfaces but 99.99% virus and bacteria-resistant too. Adding a layer of safety for you and your family.



ANTI-VIRUS
ANTI-BACTERIAL *

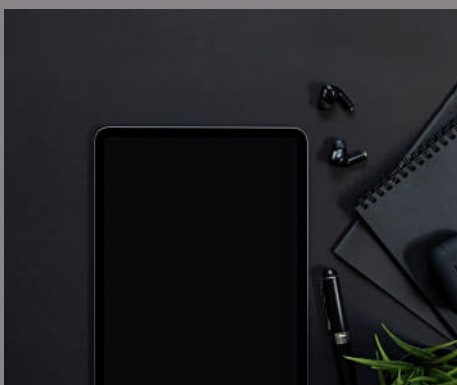


FOOD CONTACT
SUITABLE



The specially treated exterior eliminates any kind of bacterial growth on the surface. Making it perfect for kitchens.

LOW LIGHT
REFLECTION



The surface by design hardly reflects any light. Hence, they are pleasing to look at as they are easy on eyes.

What feels soft and silky is in fact made of tough exterior. Making sure the surface remains scratch-free from humans and pets due to its thermal healing properties



SCRATCH
RESISTANCE

*As per the test report virus gets 99.99% retarded in 24 hours of contact.
As per the test report bacteria gets 99.99% retarded in 24 hours of contact.

PLAY

AFX ACES 8
PERFORMANCE TESTS
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FREEDOM OF APPLICATION

There is a lot that you can do with Greenlam AFX. The fact that it is a versatile surface to decorate your interiors gives you more freedom to plan and experiment. Be it horizontal or vertical – these compacts and laminates make cleaning quick and easy. Its hydro-repellent property makes it suitable to install in wet areas such as kitchens, toilets and backyards. It is also popularly used in making furniture and interiors of heavy traffic industry such as offices, commercial buildings, healthcare, spas, malls, etc.



RETAIL



OFFICE



HEALTHCARE



HOSPITALITY



EDUCATION



TRANSPORTATION



KITCHENS



FURNITURE



BATHROOM

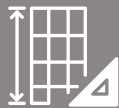
COLLECTION AT A GLANCE



DECOR/
TEXTURE(S)

11 Decors

Ultra Matt Finish



SIZE(S)

4.25'x10'

or

1300 x 3050mm



THICKNESS

0.7 mm

to

24 mm



CORE

- White
- Grey
- Brown
- Black

• Standard core offering for laminates is brown • Standard core offering for compacts is black
• Customisation from the 4 core colors available at differential pricing • All FR products will be offered in default brown core only • Standard core offering for 9861 Black X laminates is black.



F X C O L L E C T I O N

PANTONE WARM GRAY 1 U, RAL : 9001, LRV : 60.61 ±1, NCS S 1505-Y20R

9 8 5 4 D O V E ——— C L I C K

9851 WHITE X ▶

9855 BASALT GREY ▶

9857 COUNTRY BLUE ▶

9854 DOVE ▶





9857 COUNTRY BLUE ▶



9858 VICTORIAN VIOLET ▶



9860 TWILIGHT BLUE ►



9859 SEA WEED GREEN ►

RECEPTION

9855 BASALT GREY ▶





9851 WHITE X ►

9858 VICTORIAN VIOLET ►



9856 COFFEE BEAN ▶



9852 ►
EDEN GREY

9853 ►
ANTHRACITE

9861 ►
BLACK X

9851 WHITE X ►

PANTONE P 1-1C, RAL: 9003, LRV: 92.85 ±1, NCS S 0300-N

CLICK _____ 9851 WHITE X

PANTONE P 169-8C, RAL: 7039, LRV: 17.57 ±1, NCS S 5502-Y

CLICK _____ 9852 EDEN GREY

PANTONE P 174-124, RAL: 7043, LRV: 11.41 ±1, NCS S 7000 N

CLICK _____ 9853 ANTHRACITE

PANTONE BLACK 7CP, RAL: 9011, LRV: 04.46 ±1, NCS S 8500-N

CLICK _____ 9861 BLACK X

THE WORLD OF GREENLAM

Creating beautiful and unique spaces is how Greenlam started its journey. For over two decades Greenlam has been known and respected for its exceptional artistry, unsurpassed quality, and unyielding passion for excellence. With thousands of decors and surface solutions spread across laminates, compacts, decorative veneers, engineered wooden floors and doors, Greenlam has emerged as one of the foremost surfacing solution brands in the world. Its pioneering and innovative designs have won acclaim in over 100 countries with millions of delighted customers. The newness and innovations Greenlam offer make it the preferred choice of architects and consumers.

Greenlam as a responsible brand understands its commitment towards the people, planet and processes and takes all measures to ensure a healthier, safer world. From sourcing to manufacturing to recycling, we have many stringent measures in place.

APPROVED WITH DISTINCTION



GREENLAM GOES GREEN

Energy and
Water Conservation



Manufactured with
Natural Products



Zero Liquid
Discharge



Renewable
Energy Utilisation

Responsible
Forestry



Environment-Friendly
Products



Monitored Indoor
Air Quality (IAQ)



Safe and Non-Hazardous
Products

Responsible
Logistics Systems



Effective Waste
Management



EXPLORE MORE

GOODNESS IS IN THE DETAILS

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COMPACTS

				18.0 mm		12.0 mm		10.0 mm		9.0 mm		8.0 mm		6.0 mm		4.0 mm	
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	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
3	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
4	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
5	Dimensional Stability at Elevated Temperature	EN 438-2-17															
	Longitudinal Direction	%		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																	
6	Resistance to Immersion in Boiling Water (2 hours)	EN 438-2-12															
	Mass Increase	%		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
7	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
8	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
9	Flexural Strength	Mpa		80 (min)	Complies	80 (min)	Complies	80 (min)	Complies	80 (min)	Complies	80 (min)	Complies	80 (min)	Complies	80 (min)	Complies
10	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																	
11	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
12	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
13	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
14	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
15	Resistance to Scratching	N	EN 438-2-25	2.0 (min)	2.5 (min)	2.0 (min)	2.5 (min)	2.0 (min)	2.5 (min)	2.0 (min)	2.5 (min)	2.0 (min)	2.5 (min)	2.0 (min)	2.5 (min)	2.0 (min)	2.5 (min)
		Rating	EN 438-2-25	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
16	Resistance to staining	Rating	EN 438-2-26														
	Group 1 & 2			5	5	5	5	5	5	5	5	5	5	5	5	5	5
	Group 3			4	≥ 4	4	≥ 4	4	≥ 4	4	≥ 4	4	≥ 4	4	≥ 4	4	≥ 4
17	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																	
18	Reaction to Fire	EN 13501-1	Euroclass	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
19	Calorific Value	ISO 1716: 2010	MJ/kg	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																	
20	Food safe	EN 13130-1	-	-	YES	-	YES	-	YES	-	YES	-	YES	-	YES	-	YES
21	Contents' migration as per Food Commission Regulation	EN 1186-1, 3 & 14: 2002	Migration	Migration of Simulants is less than maximum permitted by Regulation													
22	Formaldehyde emission (release)	EN 16516-2017	ppm	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
23	Volatile Organic Compouns (VOC)	ISO 16000-9 Emission	Class	-	A	-	A	-	A	-	A	-	A	-	A	-	A
24	AntiViral Efficacy Reduction	ISO 21702:2019	GREENGUARD GOLD														
	% Reduction in 24 hours	%		95% (min)	99.9% (min)	95% (min)	99.9% (min)	95% (min)	99.9% (min)	95% (min)	99.9% (min)	95% (min)	99.9% (min)	95% (min)	99.9% (min)	95% (min)	99.9% (min)
	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)	Exceed
25	Anti-bacterial Efficacy & activity	JIS 2801-2012															
	% Reduction in 24 hours	%		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
26	Anti-Fungus Efficacy	ASTM G-21-2015															
	Growth after 28 days	Class		1	0 (No Growth)	1	0 (No Growth)	1	0 (No Growth)	1	0 (No Growth)	1	0 (No Growth)	1	0 (No Growth)	1	0 (No Growth)

Fire test performance will depend on laminate & compact 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 – Pseudomonas. 2. Entrococcus Faecalis, 3.Candida Albicans 4.Pseudonomas 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

TECHNICAL SPECIFICATIONS

LAMINATES

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S. NO.	PROPERTIES	Unit	TEST METHOD AS PER EN 438 Part 2 : 2016	SPECIFIED VALUES	TYPICAL GREENLAM
1	Classification		EN 438-3 Table- 3	HGS*	HGS*
2	Product features		Electron Beam Cured, Anti Finger Print, Near Zero Reflection, Ultra Matt Surface, Thermal healing of micro scratches		
DIMENSIONAL PROPERTIES					
3	Product offer, L x B	M			1.30M x 3.05M
4	Surface Quality	mm²/M²	EN 438-3-6.3, 5.2.4	1.0 (max)	Complies
5	Fibers, Hairs & Scratches	mm/M²		10.0 (max)	Complies
6	Thickness & Maximum variation	mm	EN 438-2 – 5	0.70 ± 0.10 0.80 ± 0.10	0.70 ± 0.05 0.80 ± 0.05
7	Length & Width	mm	EN 438-2 – 6	+10mm /-0mm	+5mm /-0mm
8	Flatness	mm/M	EN 438-2 – 9	60.0 (max)	≤ 50
9	Edges Straightness	mm/M	EN 438-2 – 7	1.5 (max)	≤ 1
10	Edges Squareness	mm/M	EN 438-2 – 8	1.5 (max)	Complies
SURFACE PROPERTIES					
11	Resistance to Dry Heat at 160° C	Rating	EN 438-2 -16	Not worse than 4	5
12	Resistance to Surface Wear	Revolutions	EN 438-2 - 10	150 (min.) IP	300
13	Resistance to Stains	Group 1 & 2 Group 3	Rating (min.) Appearance	EN 438-2 - 26	5 ≥ 4
14	Resistance to Wet Heat at 100°C	Rating	EN 438-2 - 18	5	5
15	Resistance to Scratching	Rating	EN 438-2 - 25	5	5
16	Resistance to Water Vapor, Appearance	Rating	EN 438-2 -14	4 (min.)	5
17	Light Fastness (Xenon-Arc Light)	Contrast	EN 438-2 - 27	4 to 5	4
18	Resistance to Micro scratches (Surface visual assessment)	Class	EN 438-2 -30	No requirement	5
19	Surface Gloss	GU	EN 13722	<10 ± 3	Less than 4
20	Chemical Spot Test	Level	SEFA 8-PL-2010 Method 81	Not more than 4 Level-3 conditions	Less than 4 conditions
PHYSICAL PROPERTIES					
21	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
22	Resistance to Impact by Small Diameter Ball	Rating	EN 438-2 - 20	20 (min)	25
23	Resistance to Immersion in Boiling Water	Rating	EN 438-2 - 12	4 (min)	5
24	Dimensional stability at Elevated temperatures		EN 438-2 - 17		
	Longitudinal	%		0.55 (max.)	Complies
	Transverse	%		1.05 (max.)	Complies
25	Resistance to cracking	Rating	EN 438-2 - 23	4 (min)	5
26	Density	g/cm³	EN ISO 1183 -1 :2004	1.35 (min.)	1.38
27	Electrostatic Dissipation Property	Ω	EN 61340-4-1	No requirement	1 x 10 ¹⁰ to 10 ¹¹
FIRE PERFORMANCE					
28	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 Preformance**	
HEALTH AND ENVIRONMENTAL PROPERTIES					
29	Formaldehyde Release	ppm Certificate Rating	EN 16516:2017 UL-2818:2013 EN 13986	0.1 Greenguard Gold No requirement	0.02 Complies Less than E1
30	Emissions with respect to Indoor Air Quality:				
	TVOC	mg/M³	UL-2818:2013	0.22	Conforms
	Formaldehyde (CAS 50-00-0 9)	ppb ³	Greenguard Gold	7.3	Conforms
	Total Aldehydes	ppm	standards	0.043	Conforms
	4-Phenylcyclohexene (CAS 4994-16-5)	µg/M³		6.5	Conforms
	Particle Matter less than 10 µm	µg/M³		20	Conforms
	1-Methyl-2-pyrrolidinone (CAS 872-50-4)	µg/M³		160	Conforms
		--		1/2 CREL or 1/100th TLV	Conforms
31	Product sanitization/hygiene	--	NSF/ANSI 35	NEMA Assessment	Conforms
32	Transfer of constituents to Food during contact	Migration of 10 mg/dm²	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
33	Antibacterial Efficacy Microbial activity & Microbial Kill	Reduction	JIS Z 2801 : 2010	2.0 (min) 99.5% (min)	Complies Complies
34	AntiViral Efficacy	Reduction	ISO 21702:2019	95.0 (min)	99.9
35	Antifungal Efficacy	Growth after 28 days	ASTM G-21-2015	Rating 1	Rating 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. I Greenlam AFX Compact Laminates can be made available in Fire Retardant variants also.

Surface Finish: Ultra matt ● Robust, resistant to dirt, anti finger marks, caressing silky feel. ● Size available : 1300 x 3050 mm i.e. 4.25' x 10'
● Thickness offering : 0.7 mm – 24 mm.



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GLOBAL HEADQUARTERS

2nd Floor, West Wing, Worldmark 1
Aerocity, IGI Airport Hospitality District
New Delhi - 110 037.
T: +91-11- 42791399

E: info@greenlam.com, W : www.greenlam.com

