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# Greenlam Compact Laminates

Greenlam
LAMINATES

Greenlam

# COMPACT LAMINATE

Cleaner. Greener. Safer.

Greenlam
LAMINATES

The best way to lead is by paving a new path. Greenlam Laminates takes pride in being the pioneer of trends in surface solutions across the globe. With a production capacity of 14.02 million sheets every year, Greenlam Laminates stands tall as among one of the top 3 manufacturers in the world.

Every Greenlam product is an evidence of its commitment towards exceptional artistry, innovation, unsurpassed quality and unyielding passion for excellence. A team of 2500 employees and a network of over 12,000 dealers in over 100 countries ensured that our beautiful designs reach architects, interior designers and end consumers who demand newness in their spaces. They are the ones who truly inspire us to innovate and ideate towards delivering the best.

# BAD NEWS FOR BACTERIA

GREENLAM
ANTI BACTERIAL
COMPACT
LAMINATES

You can't see them but they are always there, living and breathing with you.

Now, say goodbye to E. coli, Bacilius subtilis, Aspergillus niger as well as all other harmful bacteria and fungi that are snooping around in our environment.

Show them out with Greenlam Compact Laminates. Protected with anti-bacterial and anti-fungal properties layer after layer, these advanced laminates help eliminate bacteria and prevent the growth of mold, mildew and common fungi.

Great for bathrooms, kitchens, hospitals, labs & school furniture. Or just about any space where hygiene is a priority to protect yourself or people close to your heart.

**Greenlam Compact Laminates.**
**Clean out unwelcome guests.**

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# Approved by the world

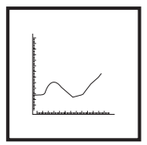
High-quality laminates have always been a Greenlam assurance. Our products have received global recognition, being awarded the BSEN-438 for meeting rigid international standards as well as the ISO 9001, ISO 14001, and OHSAS 18001 for offering world-class working systems.

Our widest range of eco-friendly and sustainable compact laminates has also earned the GREENGUARD and GREENLABEL certifications—two prestigious hallmarks of excellence that motivate us to continuously innovate better, safer and greener laminates for the world.

# MORE THAN JUST ANTI-BACTERIAL

MORE REASONS TO USE GREENLAM COMPACT LAMINATES.

Anti-bacterial


Resistance to microbial growth

Resistance to harmful chemicals and organic solvents

Hygienic

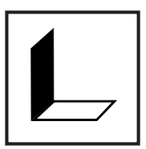
Resistance to fire

Wet-heat tested

Dry-heat tested

Greater dimensional stability

Excellent self-supporting feature


Horizontal / Vertical application

Low Emission

Scuff-resistant

Abrasion-resistant

Scratch-resistant



# MORE PLACES TO USE THEM

Schools and Kindergartens

Restroom cubicles

Restaurants

Partitions

Changing rooms

Hospitals

Laboratories

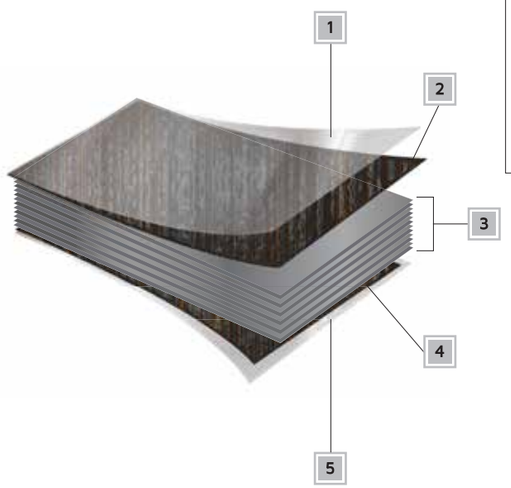
Kitchens

Lockers

Greenlam Compact Laminates are for wherever you need hygiene and protection against bacteria most.

# CONSTRUCTION TECHNIQUE

1. **Top Layer**
   Tissue Paper
2. **2nd Layer**
   Decorative/Design Paper
3. **Rest Layers**
   Kraft/Brown Papers
4. **2nd Last Layer**
   Decorative/Design Paper
5. **Bottom Layer**
   Tissue Paper

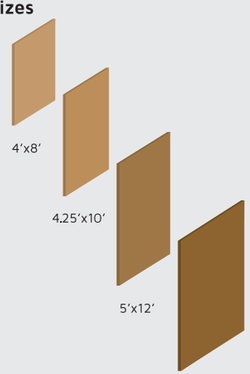



**Compact Laminates**

1. Treated with Melamine Resin only
2. Treated with Melamine Resin only
3. Treated with Phenolic Resin only
4. Treated with Melamine Resin only
5. Treated with Melamine Resin only

## RANGE OFFERING

**Sizes**




**Thickness**

**Greenlam Anti-Bacterial Compact Laminates**

1. Treated with Melamine Resin + High-efficiency Anti-Microbial Agents
2. Treated with Melamine Resin + High-efficiency Anti-Microbial Agents
3. Treated with Phenolic Resin + High-efficiency Anti-Microbial Agents
4. Treated with Melamine Resin + High-efficiency Anti-Microbial Agents
5. Treated with Melamine Resin + High-efficiency Anti-Microbial Agents

# GENERAL PURPOSE COMPACT

# PREMIUM SOLID

231
Lime Yellow

229
Yellow

215
Tangerine

247
Dutch Green

251
Bright Green

259
Lime

464
Peacock

173
Barbie Pink

161
Hot Pink

212
Viola

281
Navy Blue

Colour Coding: 4'x8 4.25'x10' 5'x12' 6'x12' Not Available

111 Designer White
116 Pearly White
149 Sheer
163 Bay

113 Frosty White
124 Mysore Ivory
133 Moon Stone
134 Mud Ash
264 Bronze

271 Light Grey
275 Pearl Grey
268 Dust
261 Dark Grey
279 Char Grey

Colour Coding: 4'x8 4.25'x10' 5'x12' 6'x12' Not Available

121 Ivory
230 Cream Yellow
257 Olive
207 Divine Yellow
217 Light Orange

141 Beige
166 Blush Pink
204 Red Dynasty
201 Maroon
297 Blue Galaxy

284 Ozone
290 Dusty Jade
289 Beryl
291 Electric Blue
401 Black

Colour Coding: 4'x8 4.25'x10' 5'x12' 6'x12' Not Available

682
Hiland Pine

770
Douglas Fur

5006
Thansau Maple

719
Mangfall Beech

5525
Hickory Oak

738
Oak

5003
Phillipine Teak

5018
Brooks Walnut

749
Sapele

5061
Fine Wenge

695
Bavarian Beech

Colour Coding: 4'x8 4.25'x10' 5'x12' 6'x12' Not Available

9610
Pure Ash



5076
Primeval Oak

5427
Refresh Oak

5353
Rosenheim Elm

5331
Midnight Acacia

9611
Innate Ash

Colour Coding: 4'x8 4.25'x10' 5'x12' 6'x12' Not Available



WOODGRAIN

# RAW SILK



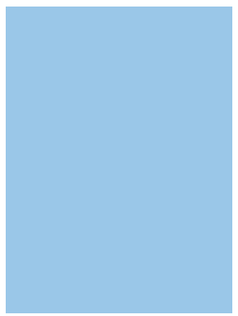
111 (RSL)
Designer White



113 (RSL)
Frosty White



124 (RSL)
Mysore Ivory



284 (RSL)
Ozone

217 (RSL)
Light Orange

261 (RSL)
Dark Grey



738 (RSL)
Oak

5061 (RSL)
Fine Wenge

Colour Coding: 4'x8 4.25'x10' 5'x12' 6'x12' Not Available



# ABSTRACT

929
Metaline Grey

923
Meta Silver

5787
Earthy Flecks

5853
Alu Taint

5577
Brooklyn

5771
Almond Pearl

5772
Nebula



5566
Clear Mesh

5568
Smoky Mesh

5578
Madison



9941
Lucent Pearly White

9945
Lucent Pearl Grey

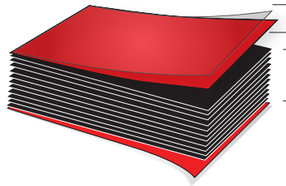
9946
Lucent Black

Colour Coding: 4'x8 4.25'x10' 5'x12' 6'x12' Not Available

Greenlam Unicore Compact Laminates is a range of high performance, single-coloured compact laminates made with multi-layered decorative papers. These laminates will make the vibrancy of every colour stand out, creating a world of inspiration.

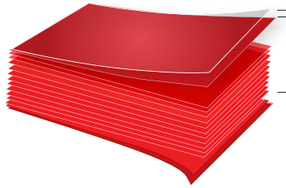
Greenlam UNICORE COMPACT LAMINATE

### General Purpose Compact Construction



1. Tissue overlays (for print decors) impregnated with melamine resins
2. Solid or print design paper layer impregnated with melamine resins
3. Kraft papers impregnated with phenolic resins

### Unicore Compact Laminate Construction



1. Tissue overlay impregnated with melamine resins
2. Solid or print design paper layers impregnated with melamine resins

### Why

- One solid colour, not only on the surface but in the core of the compact laminate as well
- Offers high abrasion
- Discards dark edges

### Where

- Cabinets
- Residential and Commercial Countertops
- Exhibits
- Signages
- Furniture

### What

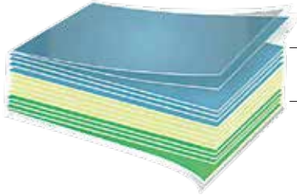
- **Size:** 1220mm x 2440mm, 1300mm x 3050mm
- **Thickness:** Customized thickness available on demand
- **Colours:** White, Mysore Ivory, Red, Black, Light Orange, Divine Yellow
- **Textures:** Suede, Gloss

Made with cutting-edge technology, Greenlam's Sandwich Compact Laminates surpass standards of excellence. With multiple colours lining the edges, these revolutionary laminates will pleasantly surprise and charm your guests with their unique appearance. You can also choose the number of linings and the different colours on each laminate, giving you the freedom to express yourself through a personalised space.

Greenlam

# SANDWICH COMPACT LAMINATE

**Sandwich Compact Construction**



1. Tissue overlay impregnated with melamine resins
2. Combination of solid design papers impregnated with melamine resins

**Why**

- Multi-coloured edges
- Customisation available
- Improved look over brown edges
- Resistance to fire
- Resistance to water
- Resistance to harmful chemicals and organic solvents
- Resistance to microbial growth

**Where**

- Cabinets
- Residential and commercial countertops
- Exhibits
- Furniture

**What**

- **Size:** 1830mm x 3660mm, 1525mm x 3660mm
- **Thickness:** 6mm, 12mm, 16mm
- **Colours:** Customised combination of plain colours available on demand
- **Textures:** Suede

# AFX COMPACT

Greenlam Anti-fingerprint laminate will change the way of looking at interiors, this laminate has a special treated décor which makes the surface impression free. That's not all, it's also scratch resistant and low maintenance product.

Give your interiors an everlasting look with Greenlam AFX.

Greenlam | AFX ANTI-FINGERPRINT COMPACT LAMINATE

9851
White X

9852
Eden Grey

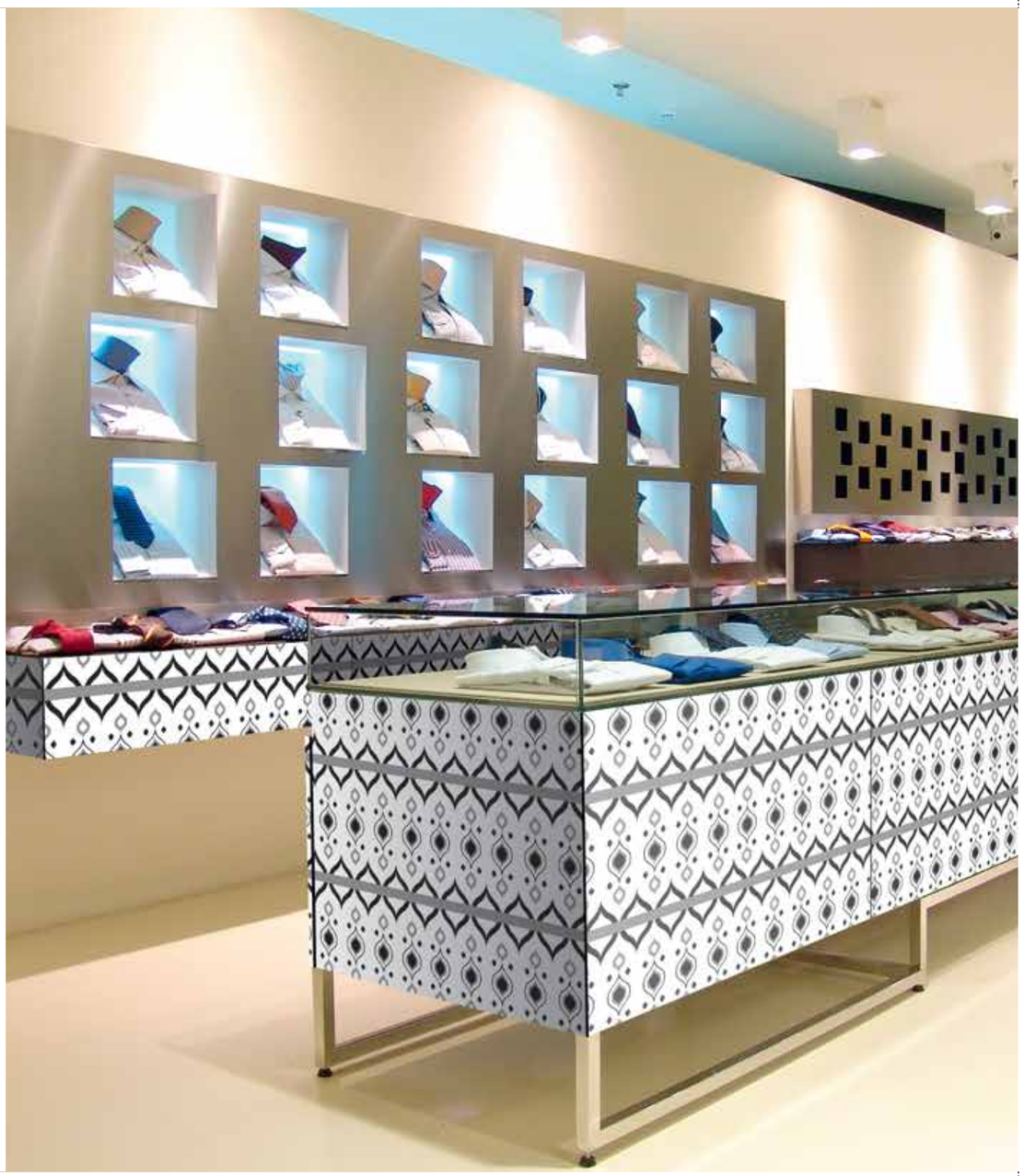
9861
Black X

**Why**
- Anti-fingerprint
- Resistant to Mould & scratches.
- Produced with electron beam curing (EBC) technology
- Easy to clean and soft touch

**Where**
- Retail counters
- Kitchen interiors
- Bathroom interiors
- Furniture and wardrobes

**What**
- **Sizes:** 1300 x 3050 mm
- **Thicknesses:** Customized thickness available on demand
- **Colours:** White, Black, Grey (Other solid colors can be developed)
- **Surface:** Zero Reflection Matt Finish.

REFLECTION
DIGITAL & CUSTOM COMPACT



Catered to all kinds of space, planned by the most seasoned of artistic minds. Digital Compact Laminates feature an innovative range of bold designs digitally printed on them.

Have a picture you'd like on your wall? Custom Compact Laminates give you the freedom to deck your world with customised images for a personal touch, converting your photographs or designs into laminates just the way you want it.

Greenlam

# Reflection

Digital & Custom Compact Laminate

**Why**

- Advanced laminates with an extensive variety of colour, pattern and texture
- Superior print quality, with precise colour
- Delivers single linear structure across two or more continuous sheets without breakage of patterns
- Wide and expansive application areas

**Where**

- Cabinets
- Residential and commercial countertops
- Exhibits
- Furniture

**What**

- **Size:** 1220mm x 2440mm
- **Thickness:** 6mm, 12mm, 16mm
- **Decors:** Over 200 pre-crafted designs
- **Textures:** Suede, Gloss

Designed with the purpose of shielding surfaces from chemical abuse, Greenlam LabGuardian chemical resistant Compact Laminates are resistant to harsh chemicals and bases along with harsh cleaning agents - making them ideal for laboratories.

First, the decorative paper is fully impregnated, then a multi-layer coating of the unique patented Electron Beam Curing (EBC) Acrylic Resins is applied immediately after, without intermediate curing or drying. This unique manufacturing process not only makes the laminate highly resistant to most chemicals, it also renders it non-porous, thus stopping bacterial growth on the surface, resulting in a product that is also anti-bacterial.

Greenlam LabGuardian confirms to industrial standard and has been tested as per SEFA 1999 Clause 8.1 Chemical Spot Test, with excellent result.

Greenlam

# LabGuardian™

Chemical Resistant Compact Laminates

**Why**
- Supreme resistance to harsh chemicals, bases and cleaning agents
- Non-porous
- Anti-bacterial

**Where**
- Laboratories

**What**
- **Size:** 1525mm x 3660mm
- **Thickness:** 13mm, 16mm, 20mm

9801
Argent White

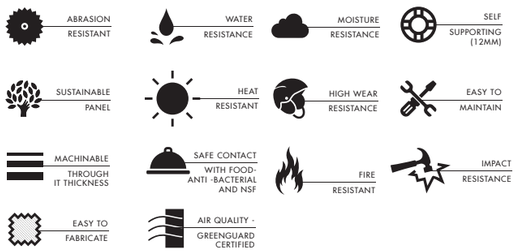
9802
Cinereal

9803
Black

Greenlam

# WORKTOPS
KITCHEN SURFACE SOLUTION

Greenlam compacts bring to you a way to turn your kitchen into a piece of art. Presenting the Worktop collection, a complete kitchen surface solution that includes breakfast bars, countertops, backsplashes, upstands and island tops. A perfect blend of beauty and utility, these temperature-neutral and easy-to-install kitchen tops bring your kitchen alive through countless textures and designs, in no time.




**Why**
- Temperature Neutral
- Cost Effective: (Low Installation Cost)
- Easy to Install
- Easy to Uninstall and Reuse
- Beautiful Textures

**Where**
Kitchen interiors
- Worktop
- Upstand
- Breakfast bar
- Back Splash

**What**
- **Size:**
  Multiple
- **Thickness:**
  12mm
- **Colors:**
  Available in 13 colors

Greenlam

# CLADS

EXTERIOR GRADE COMPACT LAMINATES

Using revolutionary GLE Technology, CLADS Exterior Grade Compact Laminates from Greenlam are treated to resist difficult weather conditions, moisture, microbes, and even fire. Along with their colour fastness, they are the perfect material for making your exteriors stand out.

GLE Technology employs superior manufacturing methods with superior decor paper, along with a final, special protective film, allowing Greenlam CLADS to withstand salt deposits and the elements. To form CLADS, layers of kraft paper are impregnated with halogen-free FR grade phenolic resin, with exterior grade decorative paper on both sides impregnated with melamine resins and, finally, a protective polymeric layer on top and at the bottom.

CLADS are available in a range of 29 stunning designs, allowing you to give your home, office, and building exteriors a signature style of their own.

**Why**

- Excellent weather-resistance
- Highly-resistant to moisture, microbes, and fire
- Designed for exterior durability
- Colourfast

**Where**

- Residential exteriors
- Commercial exteriors

**What**

- **Size:** 1300mm x 3050mm
- **Thickness:** 6mm, 8mm, 10mm
- **Colours:** Available in 29 colours
- **Textures:** Suede

# WOODGRAIN

9105
Caramel Streak

9112
Trusted Teak

9111
Novacento Pine

9106
Coral Streak

9108
Arch Wood

9103
Smoldered Wood

9110
Pure Walnut

9104
Enigma

9101
Heather Pine

9107
Lorraine Walnut

9109
Snake Wood

9102
Innate Wenge

**9113** N
**Icelandic Oak**

**9114** N
**Oregon Oak**

**9115** N
**Nevada Elm**



# ABSTRACT

9205
Citron Stone

9202
Eldorado

9209 N
Russet Stein

9201
Premio

9204
Metropolitan

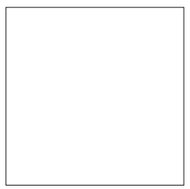
9207 N
Harbour

9206
Lava Stone

9208 N
Pietra

9203
Cementrio

# SOLID



9271
Clear White



9272
Oyster

9275
Vermilion Red

9273
Murky Grey

9274
Choco Brown

# QUALITY ASSURANCE

**Safe Healthy Living Begins with GREENLAM®**

Our entire range of laminates is incorporated with Safeguard™ Plus, a revolutionary technology that retards growth of nearly 99% of common bacteria. From hygiene-sensitive environments like laboratories and kindergartens to conventional spaces like bedrooms and offices, your health is always assured with Greenlam.

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**GREENGUARD Certification Program**

**GREENLAM®** laminates are classified under the Low Emitting Product category by the GREENGUARD standards, meaning that harmful pollutants in the air are suppressed to the lowest levels. This is an assurance that our products are designed for use in office environments and other indoor spaces, and promote a healthier environment in these areas.

**GREENGUARD Gold Certification**

This certification, with a stricter criteria, means that **GREENLAM®** products are suitable for use in environments where children spend significant periods of time, including schools, daycares and healthcare facilities.

To know more about the GREENGUARD certifications, visit **www.greenguard.org**

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**GREENLABEL Certification**

042 - 003
ENVIRONMENTAL
IMPROVED
LOW EMISSION
LOW TOXICITY

In 2010, GREENLAM® was awarded the GreenLabel Singapore by the Singapore Environment Council. GREENLAM® is the first brand in Asia to have received the GreenLabel certification on its entire range of products. The GreenLabel certification is awarded based on a set of strict qualification criteria. It further endorses our efforts to be a green brand that contributes to a healthy environment for work, play and living.

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Greenlam Product has been awarded with CE certification which is given to those manufacturers who declares that the product complies with the essential requirments of the relevant European health, safety and environmental protection legislation, in practice by many Product Directives.
CE Marking on a product indicates to govermental officials that the product may be legally placed on the market in their country.

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The FSC certification is considered the “gold standard” designation for wood harvested from forests that are responsibly managed, socially beneficial, environmentally conscious and economically viable. If a product, like a peace of tropical hardwood furniture, is labeled as “FSC Certified,” It means that the wood used in the piece and manufacturer that made it met the requirments of the forest stewardship Council. In our case we can provide FSC grade laminate for any project which wants to earn LEED points for Green building certifications.

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All Greenlam Laminates are certified by prestigious American body NSF international, making it the safest laminates for human health, even it can be used in direct contact with food.

# TECHNICAL SPECIFICATIONS

NOTE: The following specifications are relevant exclusively to Greenlam General Purpose Compact Laminate. They may not apply to other Greenlam compact laminate series, which include Sandwich, Unicore, LabGuardian, AFX and Clads compact laminates.

| S. NO. | PROPERTIES | Unit | "TEST METHOD 438 Part 2 & 4 : 2016" | SPECIFIED VALUES | TYPICAL GREENLAM RESULTS | SPECIFIED VALUES | TYPICAL GREENLAM RESULTS | SPECIFIED VALUES | TYPICAL GREENLAM RESULTS | SPECIFIED VALUES | TYPICAL GREENLAM RESULTS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | CLASSIFICATION | | EN 438-4- 4 | COMPACT GENERAL PURPOSE STANDARD, CGS | | COMPACT GENERAL PURPOSE FLAME RETARDANT, CGF | | COMPACT GENERAL PURPOSE FLAME RETARDANT, CGF | | COMPACT GENERAL PURPOSE FLAME RETARDANT, CGF | |
| 2 | Thickness & Maximum variation | mm | EN 438-2 - 5 | 10.0 ± 0.50 | 10.0 ± 0.40 | 10.0 ± 0.50 | 10.0 ± 0.40 | 12.0 ± 0.60 | Complies | 12.0 ± 0.60 | Complies |
| 3 | Length & Width | mm | EN 438-2 - 6 | +10mm /-0mm | Complies | +10mm /-0mm | Complies | +10mm /-0mm | Complies | +10mm /-0mm | Complies |
| 4 | Resistance to Dry Heat at 160° C | Rating | EN 438-2 -16 | 4 (min.) | 5 | 4 (min.) | 5 | 4 (min.) | 5 | 4 (min.) | 5 |
| 5 | Resistance to Surface Wear, Initial point | Rev. | EN 438-2 -10 | 150 (min.) | Complies | 150 (min.) | Complies | 150 (min.) | Complies | 150 (min.) | Complies |
| 6 | Resistance to Water Vapor, Appearance | Rating | EN 438-2 -14 | 4 (min.) | 5 | 4 (min.) | 5 | 4 (min.) | 5 | 4 (min.) | 5 |
| 7 | Resistance to Immersion in Boiling Water (2 hours) | | | | | | | | | | |
| | a) Mass Increase | % | EN 438-2 - 12 | 2.0 (max.) | 0.5 | 3.0 (max.) | 0.95 | 2.0 (max.) | 0.50 | 3.0 (max.) | 1.00 |
| | b) Thickness | % | | 2.0 (max.) | 0.7 | 6.0 (max.) | 1.80 | 2.0 (max.) | 0.88 | 6.0 (max.) | 1.82 |
| | c) Surface appearance | Rating | | 4 (min.) | 5 | 4 (min.) | 5 | 4 (min.) | 5 | 4 (min.) | 5 |
| | d) Edge appearance | | EN 438-2 - 17 | 3 (min.) | 4 | 3 (min.) | 4 | 3 (min.) | 4 | 3 (min.) | 4 |
| 8 | Dimensional Stability at Elevated Temperature | | | | | | | | | | |
| | a) Longitudinal | % | | 0.30(max.) | 0.15 | 0.30(max.) | 0.18 | 0.30(max.) | 0.08 | 0.30(max.) | 0.16 |
| | b) Transverse | % | | 0.60(max) | 0.25 | 0.60 (max) | 0.28 | 0.60 (max) | 0.15 | 0.60 (max) | 0.28 |
| 9 | Resistance to Impact by Large Diameter Ball | | | | | | | | | | |
| | a) Drop Height | mm | EN 438-2 - 21 | 1800 | 2000 | 1800 | 2000 | 1800 | 2000 | 1800 | 2000 |
| | b) Diameter of Indentation | mm | | 10 (max) | 7 | 10 (max) | 7 | 10 (max) | 7 | 10 (max) | 7 |
| 10 | Resistance to Scratching, Force | Rating | EN 438-2 - 25 | 3 (min.) | 4 | 3 (min.) | 4 | 3 (min.) | 4 | 3 (min.) | 4 |
| 11 | Resistance to staining Group 1 & 2 | Rating | EN 438-2 - 26 | | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| | Group 3 | Rating | | | ≥ 4 | 4 | ≥ 4 | 4 | ≥ 4 | 4 | ≥ 4 |
| 12 | Resistance to Wet heat (100°C), Appearance | Rating | EN 438-2 - 18 | 4 (min.) | 5 | 4 (min.) | 5 | 4 (min.) | 5 | 4 (min.) | 5 |
| 13 | Resistance to Crazing, Appearance | Rating | EN 438-2 - 24 | 4 (min.) | 5 | 4 (min.) | 5 | 4 (min.) | 5 | 4 (min.) | 5 |
| 14 | Flexural Modulus | Mpa | EN ISO 178:2003 | 9000 (min.) | 11000 | 9000 (min.) | 10700 | 9000 (min.) | 11000 | 9000 (min.) | 10700 |
| 15 | Flexural Strength | Mpa | EN ISO 178:2003 | 80 (min.) | 100 | 80 (min.) | 100 | 80 (min.) | 100 | 80 (min.) | 100 |
| 16 | Light Fastness (Xenon Arc), Grey Scale | Rating | EN 438-2 - 27 | 4 to 5 | Complies | 4 to 5 | Complies | 4 to 5 | Complies | 4 to 5 | Complies |
| 17 | Density | g/cm3 | "EN ISO 1183 -1: 2004" | 1.35 | 1.38 | 1.35 | 1.38 | 1.35 | 1.38 | 1.35 | 1.38 |
| 18 | Reaction to Fire (Tested according to EN 13823:2010 & EN 11925-2 :2010)* | Euro Class | EN 438-7 & EN 13501-1: 2007+ A1:2009 | D-s2,d0 or better | "C-S2, d0 Superior, better" | B-s2,d0 | "B-S1, d0, Superior, better" | "D-s2,d0 or better" | "C-S2, d0 Superior, better" | B-s2,d0 | "B-S1, d0, Superior, better" |

(B, C, D=Fire behavior; Smoke production = s/1, s/2; Flame droplets =d0)

Sizes available - 1220mm x 2440mm, 1300mm x 3050mm, 1525mm x 3660mm, 1830mm x 3660mm



Greenlam

COMPACT LAMINATE

| S. NO. | PROPERTIES | Unit | "TEST METHOD 438 Part 2 & 4 : 2016" | SPECIFIED VALUES | TYPICAL GREENLAM RESULTS | SPECIFIED VALUES | TYPICAL GREENLAM RESULTS | SPECIFIED VALUES | TYPICAL GREENLAM RESULTS | SPECIFIED VALUES | TYPICAL GREENLAM RESULTS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | CLASSIFICATION | | EN 438-4- 4 | COMPACT GENERAL PURPOSE STANDARD, CGS | | COMPACT GENERAL PURPOSE FLAME-RETARDANT, CGF | | COMPACT GENERAL PURPOSE FLAME-RETARDANT, CGS | | COMPACT GENERAL PURPOSE FLAME-RETARDANT, CGF | |
| | | | | | | | | | | | |
| 2 | Thickness & Maximum variation | mm | EN 438-4- 4 | 13.0 ± 0.60 | Complies | 13.0 ± 0.60 | Complies | 18.0 ± 0.70 | Complies | 18.0 ± 0.70 | Complies |
| 3 | Length & Width | mm | EN 438-2 - 5 | +10mm /-0mm | Complies | +10mm /-0mm | Complies | +10mm /-0mm | Complies | +10mm /-0mm | Complies |
| 4 | Resistance to Dry Heat at 160° C | Rating | EN 438-2 - 6 | 4 (min.) | 5 | 4 (min.) | 5 | 4 (min.) | 5 | 4 (min.) | 5 |
| 5 | Resistance to Surface Wear, Initial point | Rev. | EN 438-2 -16 | 150 (min.) | Complies | 150 (min.) | Complies | 150 (min.) | Complies | 150 (min.) | Complies |
| 6 | Resistance to Water Vapor, Appearance | Rating | EN 438-2 -10 | 4 (min.) | 5 | 4 (min.) | 5 | 4 (min.) | 5 | 4 (min.) | 5 |
| 7 | Resistance to Immersion in Boiling Water (2 hours) | | EN 438-2 -14 | 2.0 (max.) | 0.50 | 3.0 (max.) | 1.00 | 2.0 (max.) | 0.35 | 3.0 (max.) | |
| | a) Mass Increase | % | EN 438-2 - 12 | 2.0 (max.) | 0.88 | 6.0 (max.) | 1.82 | 2.0 (max.) | 0.72 | 6.0 (max.) | 0.75 |
| | b) Thickness | % | | 4 (min.) | 5 | 4 (min.) | 5 | 4 (min.) | 5 | 4 (min.) | 1.42 |
| | c) Surface appearance | Rating | | 3 (min.) | 4 | 3 (min.) | 4 | 3 (min.) | 4 | 3 (min.) | 5 |
| | d) Edge appearance | | | | | | | | | | 4 |
| 8 | Dimensional Stability at Elevated Temperature | % | EN 438-2 - 17 | 0.30(max.) | 0.08 | 0.30(max.) | 0.16 | 0.30(max.) | 0.04 | 0.30(max.) | 0.08 |
| | a) Longitudinal | % | | 0.60 (max) | 0.15 | 0.60 (max) | 0.28 | 0.60 (max) | 0.10 | 0.60 (max) | 0.20 |
| | b) Transverse | | | | | | | | | | |
| 9 | Resistance to Impact by Large Diameter Ball | mm | EN 438-2 - 21 | 1800 | 2000 | 1800 | 2000 | 1800 | 2000 | 1800 | 2000 |
| | a) Drop Height | mm | | 10 (max) | 7 | 10 (max) | 7 | 10 (max) | 7 | 10 (max) | 7 |
| | b) Diameter of Indentation | | | | | | | | | | |
| 10 | Resistance to Scratching, Force | Rating | EN 438-2 - 25 | 3 (min.) | 4 | 3 (min.) | 4 | 3 (min.) | 4 | 3 (min.) | 4 |
| 11 | Resistance to staining Group 1 & 2 | Rating | EN 438-2 - 26 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| | Group 3 | Rating | | 4 | ≥ 4 | 4 | ≥ 4 | 4 | ≥ 4 | 4 | ≥ 4 |
| 12 | Resistance to Wet heat (100°C), Appearance | Rating | EN 438-2 - 18 | 4 (min.) | 5 | 4 (min.) | 5 | 4 (min.) | 5 | 4 (min.) | 5 |
| 13 | Resistance to Crazing, Appearance | Rating | EN 438-2 - 24 | 4 (min.) | 5 | 4 (min.) | 5 | 4 (min.) | 5 | 4 (min.) | 5 |
| 14 | Flexural Modulus | Mpa | EN ISO 178:2003 | 9000 (min.) | 11000 | 9000 (min.) | 10700 | 9000 (min.) | 11000 | 9000 (min.) | 10700 |
| 15 | Flexural Strength | Mpa | EN ISO 178:2003 | 80 (min.) | 100 | 80 (min.) | 100 | 80 (min.) | 100 | 80 (min.) | 100 |
| 16 | Light Fastness (Xenon Arc), Grey Scale | Rating | EN 438-2 - 27 | 4 to 5 | Complies | 4 to 5 | Complies | 4 to 5 | Complies | 4 to 5 | Complies |
| 17 | Density | g/cm3 | "EN ISO 1183 -1:2004" | 1.35 | 1.38 | 1.35 | 1.38 | 1.35 | 1.38 | 1.35 | 1.38 |
| 18 | Reaction to Fire (Tested according to EN 13823:2010 & EN 11925-2 :2010)* | Euro class | EN 438-7 & EN 13501-1: 2007+ A1:2009 | D-s2,d0 or better | C-S2, d0 Superior, better | B-s2,d0 | B-S1, d0, Superior, better | D-s2,d0 or better | C-S2, d0 Superi or, better | B-s2,d0 | B-S1, d0, Superior, better |

(B, C, D=Fire behavior; Smoke production = s/1, s/2; Flame droplets =d0)

Sizes available - 1220mm x 2440mm, 1300mm x 3050mm, 1525mm x 3660mm, 1830mm x 3660mm

# TECHNICAL SPECIFICATIONS

LabGuardian™
Chemical Resistant Compact Laminates

| S. NO. | PROPERTIES | Unit | "TEST METHOD AS PER EN 438 Part 2& 4 : 2016" | SPECIFIED VALUES | TYPICAL GREENLAM RESULTS | SPECIFIED VALUES | TYPICAL GREENLAM RESULTS |
|---|---|---|---|---|---|---|---|
| 1 | CLASSIFICATION | | EN 438-4- 4 | COMPACT GENERAL PURPOSE STANDARD, CGS | | COMPACT GENERAL PURPOSE FLAME RETARDANT, CGF | |
| 2 | Thickness & Maximum variation | mm | EN 438-2 - 5 | 12.0 ± 0.60 | Complies | 12.0 ± 0.60 | Complies |
| 3 | Length & Width | mm | EN 438-2 - 6 | +10mm /-0mm | Complies | +10mm /-0mm | Complies |
| 4 | Resistance to Dry Heat at 160° C | Rating | EN 438-2 -16 | 4 (min.) | 5 | 4 (min.) | 5 |
| 5 | Resistance to Surface Wear, Initial point | Rev. | EN 438-2 -10 | 150 (min.) | Complies | 150 (min.) | Complies |
| 6 | Resistance to Water Vapor, Appearance | Rating | EN 438-2 -14 | 4 (min.) | 5 | 4 (min.) | 5 |
| 7 | Resistance to Immersion in Boiling Water (2 hours) | | EN 438-2 - 12 | | | | |
| | a) Mass Increase | % | | 2.0 (max.) | 0.50 | 3.0 (max.) | 1.00 |
| | b) Thickness | % | | 2.0 (max.) | 0.88 | 6.0 (max.) | 1.82 |
| | c) Surface appearance | Rating | | 4 (min.) | 5 | 4 (min.) | 5 |
| | d) Edge appearance | | | 3 (min.) | 4 | 3 (min.) | 4 |
| 8 | Dimensional Stability at Elevated Temperature | | EN 438-2 - 17 | | | | |
| | a) Longitudinal | % | | 0.30(max.) | 0.07 | 0.30(max.) | 0.14 |
| | b) Transverse | % | | 0.60 (max) | 0.14 | 0.60 (max) | 0.25 |
| 9 | Resistance to Impact by Large Diameter Ball | | EN 438-2 - 21 | | | | |
| | a) Drop Height | mm | | 1800 | 2000 | 1800 | 2000 |
| | b) Diameter of Indentation | mm | | 10 (max) | 7 | 10 (max) | 7 |
| 10 | Resistance to Scratching, Force | Rating | EN 438-2 - 25 | 3 (min.) | 4 | 3 (min.) | 4 |
| 11 | Resistance to staining Group 1 & 2 | Rating | EN 438-2 - 26 | 5 | 5 | 5 | 5 |
| | Group 3 | Rating | | 4 | ≥ 4 | 4 | ≥ 4 |
| 12 | Resistance to Wet heat (100°C), Appearance | Rating | EN 438-2 - 18 | 4 (min.) | 5 | 4 (min.) | 5 |
| 13 | Resistance to Crazing, Appearance | Rating | EN 438-2 - 24 | 4 (min.) | 5 | 4 (min.) | 5 |
| 14 | Flexural Modulus | Mpa | EN ISO 178:2003 | 9000 (min.) | 11000 | 9000 (min.) | 10700 |
| 15 | Flexural Strength | Mpa | EN ISO 178:2003 | 80 (min.) | 100 | 80 (min.) | 100 |
| 16 | Light Fastness (Xenon Arc), Grey Scale | Rating | EN 438-2 - 27 | 4 to 5 | Complies | 4 to 5 | Complies |
| 17 | Density | g/cm3 | "EN ISO 1183 -1:2004" | 1.35 | 1.38 | 1.35 | 1.38 |
| 18 | Chemical & Stain Resistance | | | "Conforms to SEFA 8.1-PL-2010 Chemical spot test" | | | |
| 19 | Reaction to Fire (EN 13501-1: 2007+ A1:2009 classification) | Euro class | Tested according to EN 13823:2010 & EN 11925-2 :2010 | D-s2,d0 or better | C-S2, d2 Superior better | B-s2,d0 | B-S1, d0, Superior ,better |

(B, C, D=Fire behavior; Smoke production = s/1, s/2; Flame droplets =d0)

Sizes available - 1525mm x 3660mm