

**PRODUCT  
PORTFOLIO**

[www.stylam.com](http://www.stylam.com)



# SPECIALITY LAMINATES

## COMPACT LAMINATE

**+GUARD** - CHEMICAL RESISTANT LAMINATE

FIRE RETARDANT LAMINATE

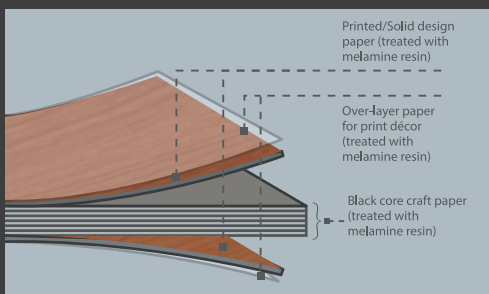
INDUSTRIAL LAMINATE



# COMPACT LAMINATE

Stylam Compact laminates are formulated with inner core of celluloid fibres impregnated with special thermosetting resins. These resins and the special heat and pressure cycles impart properties of a solid, load bearing hard laminate, which is resistant to wide range of atmospheric and chemical agents for use in internal and external atmospheric conditions. High values of Flexural strength and tensile strength ensures that these laminates are suitable for saw cutting, drilling, machining and punching as per requirement.

Stylam Industries Limited has been awarded European CE Certification for its both Internal and External application Compact laminates range by ITC Inc., Czech Republic and has fulfilled all requirements as applicable as per EN 438-7:2005. Stylam Industries Limited is the first laminate manufacturer in India and among very few in the world to be awarded this coveted certification.



Available Options - Brown cores, Black cores, Sandwiched Design cores, Multi Color Stripe Cores, Unicore etc.

## APPLICATIONS

The prominent applications include both Interiors & Exteriors spaces:

- Flooring
- Cabin Partitions,
- Laboratory Furniture
- Interior Walls
- X-ray Tables
- Bedroom Cupboards
- Kitchen Working Surfaces
- Living Room Cabinets
- Bathroom Doors,
- Wall Panels
- Exhibition Stands



# CHEMICAL RESISTANT LAMINATE

With excellent AB & AF properties, +Plus Guard STYLAM Compact Panels will meet the demands in areas where chemicals and water are used more and where contamination is a genuine threat. A very special acrylic resin formulation is applied over decorative surface paper to achieve highest degree of chemical resistance together with a maximum scratch resistance. The decorative paper is impregnated with several acrylic coating to make the surface free from any porosity and then hardened by electron beam curing. The impregnated decor paper then is assembled with several layers of Phenolic resin treated Kraft paper and pressed under 90Kg/sq cm specific pressure and at about 150°C temperature for about 30 to 40 min.

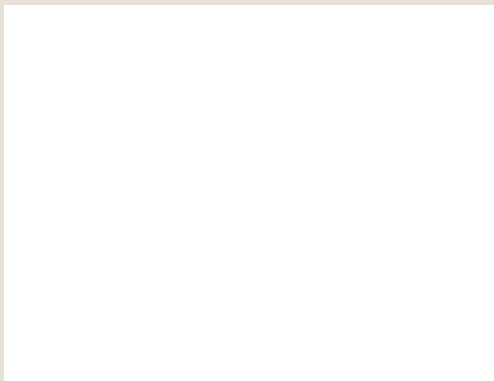
+Plus Guard STYLAM Laminate is resistant to large number of relatively strong chemicals used in a laboratory making it ideal to be used in Chemical, Analytical, micro-biological, healthcare, pharmaceuticals & educational laboratories. +Plus Guard STYLAM Laminate provides a highly durable surface in lab conditions and has better abrasion & Scratch Resistance.



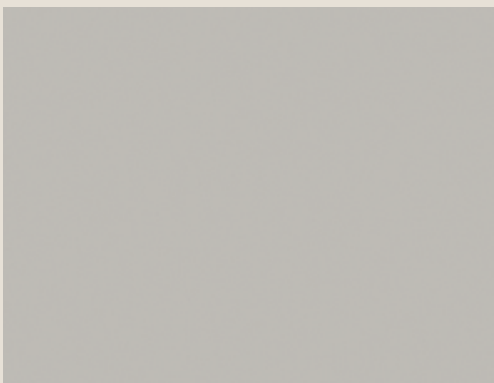
## Sheet sizes

SIZE 1 : **1550 x 3660 mm**

Available thickness: **1mm & above**  
(as per Standard Grade)



Lab White CR-0043/S2



Lab Grey CR-0044/S2



Lab Black CR-0042/S2



## APPLICATIONS



- Kitchen Sinks
- Table Counters
- Wardrobes
- Cabinets
- Wall panels
- Lab benches
- Clinics Furniture
- Photographic Labs
- Science Labs
- Space Research Labs
- Operational Rooms
- Chemical Industry

## INDUSTRIAL LAMINATE

Stylam Industrial Laminates are structural composite materials that consists of two components - a reinforcement material and a thermosetting resin system. The two components are cured together under pressure at high temperature into the finished composite material. The reinforcement materials and the resin systems can be combined individually, making it possible to construct composite materials with very specific properties which helps it being attractive and versatile in nature when compared to its alternatives in other structural materials.

Laminates also have stable geometry at high temperatures and have minimal deformation when subjected to loads. In addition, they have a high strength to weight ratio and also have properties that do not deteriorates with age. From their other application as insulating material in electro-mechanical designs, modern laminates have spread to a large number of other industries, resulting in a constantly increasing number of new applications.



## APPLICATIONS

Mechanical applications:

- Engineering materials
- Wear and Slide parts

Electrical applications:

- Electrical Insulation
- Engineering materials

# FIRE RETARDANT LAMINATE

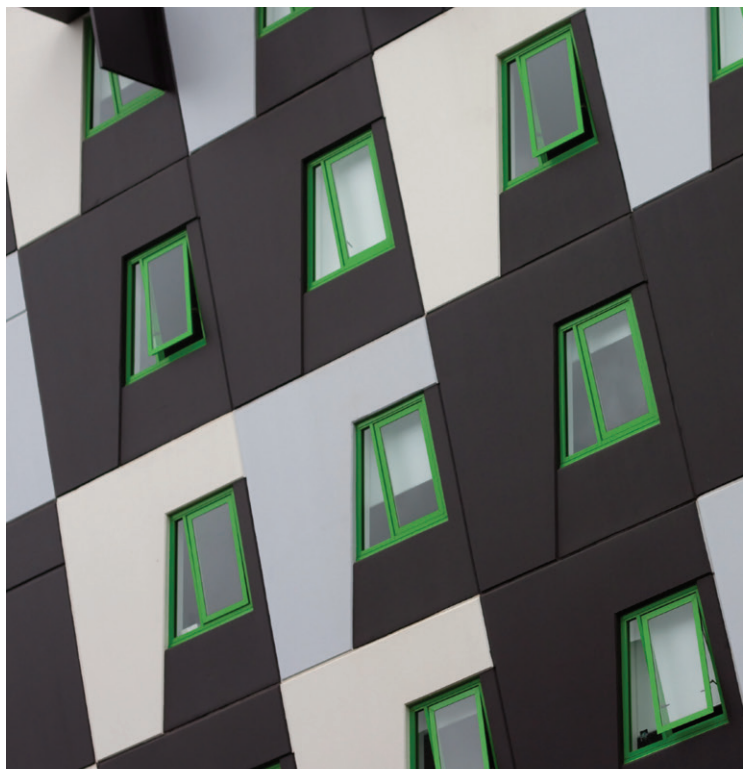
Stylam Fire Retardant Laminates are manufactured by impregnating papers with special of phenolic resin having imported fire retardant chemicals in its composition. This special resin formula ensures high resistance to the flame propagation. These Laminates ensures immediate full extinguish as soon as the flame source is removed thus eliminates the risk of toxic smoke. Stylam Fire Retardant Laminates have been certified conforming to Euroclass-Brequirement by Applus Laboratory, Spain. These laminates are designed for use requiring flame and smoke resistance in all modern day furniture and industrial applications

## APPLICATIONS

- Fire prone areas
- Kitchens, Cabinets, Interior Doors, Wall Panels
- Airports
- Hotels
- Office buildings
- Shopping malls
- Multiplexes
- Hospitals
- Schools
- Apartments

## FABRICATION

- **SAWING:** To avoid chipping, it is important that the saw blade teeth cut into the decorative face.
- **CIRCULAR SAWING:** To avoid vibration that causes chipping, make sure to provide support to the material near the point of blade contact.
- **ROUTING:** Electric or air powered carbide tip routers could be used for routing. Recommended router speed is 16000 to 22000 rpm. For special edge trimming very high speed routers should be used to achieve smooth-edge chip-free work.
- **EDGE FINISHING:** Belt sanders may be used to push the self-edge before the laminate top is applied.
- **ADHESIVES:** Special Post Forming Adhesive is recommended.
- **PROTECTIVE FILM:** The protective film should be removed as soon as the application is complete. Else exposure to strong lights may cause a pale residue and make it difficult to remove the protective film.





# TECHNICAL PROPERTIES

High Pressure Laminates (HPL) as per EN 438-2 & 3 : 2016, are available in the standard HGS/VGS and Anti-finger range.

SL. NO.	PROPERTIES	TEST METHOD	ATTRIBUTES OF PERFORMANCE	UNIT OF MEASUREME NT	RESULTS (AS PER EN 438-4)
			EN-438 Laminate Classification		CGF/EDF
1	SURFACE QUALITY				
1.1	Surface quality	EN 438-2.4	Spots, dirt and similar surface defects	mm <sup>2</sup> /m <sup>2</sup>	≤ 1
			Fibres, hairs and scratches	mm/m <sup>2</sup>	≤ 10
2	DIMENSIONAL PROPERTIES				
2.1	Thickness	EN 438-2.5	Thickness tolerance	mm	1 ≤ T < 2 : ± 0.15
				mm	2 ≤ T < 3 : ± 0.2
				mm	3 ≤ T < 5 : ± 0.3
2.2	Size	EN 438-2.6	Length and width	mm	+ 10 / - 0
2.3	Straightness of edges	EN 438-2.7	Straightness of edges	mm/m	≤ 1,5
2.4	Squareness	EN 438-2.8	Squareness	mm/m	≤ 1,5
2.5	Flatness	EN 438-2.9	Flatness (measured on full-size sheet)	mm/m	Max, 8,0
3	PHYSICAL PROPERTIES				
3.1	Resistance to surface wear	EN 438-2.10	Wear Resistance	Revolutions	≥ 350
3.2	Resistance to immersion in boiling water	EN 438-2.12	Mass increase	%	CGF - ≤ 7
			Thickness increase	%	CGF - ≤ 9
			Appearance - Gloss Finish	Rating	≥ 3
			Appearance - Other Finishes	Rating	≥ 4
3.3	Resistance to water vapour	EN 438-2.14	Appearance - Gloss Finish	Rating	≥ 3
			Appearance - Other Finishes	Rating	≥ 4
3.4	Resistance to dry heat (180°C)	EN 438-2.16	Appearance - Gloss Finish	Rating	≥ 3
			Appearance - Other Finishes	Rating	≥ 4
3.5	Dimensional stability at elevated temperatures	EN 438-2.17	Cumulative dimensional change - 2 ≤ T<5mm	L %	≤ 0,40
				T %	≤ 0,80
3.6	Resistance to impact with large diameter ball	EN 438-2.21	Indent. dia. 10mm - Drop Height	mm	≥ 1400
3.7	Resistance to crazing	EN 438-2.24	Appearance	Rating	≥ 4
3.8	Resistance to scratching	EN 438-2.25	Appearance - Smooth Finishes	Rating	≥ 2
			Appearance - Textured Finishes	Rating	≥ 3
3.9	Resistance to staining	EN 438-2.26	Appearance - Group 1 & 2	Rating	≥ 5
			Appearance - Group 3	Rating	≥ 4
3.10	Light fastness (Xenon arc)	EN 438-2.27	Contrast	Grey scale rating	4 to 5
3.11	Flexural modulus	EN ISO 178	Stress	Mpa	≥ 9000
3.12	Flexural strength	EN ISO 178	Stress	Mpa	≥ 80
3.13	Density	EN ISO 1183	Density	gm/cm <sup>3</sup>	≥ 1,35
4	FIRE PERFORMANCES				
			Test as per EN 13823 (SBI test) and EN ISO 11925-2 (Small-burner test)		
4.1	Fire Reaction Classification, EGF-EDF	EN 135 01	Classification - 3 ≤ T < 6 mm	Rating	B - s2, d0
			Classification - T ≥ 6 mm	Rating	B - s1, d0
4.2	Fire Reaction Classification, EGS-EDS	EN 135 01	Classification - T ≥ 10 mm	Rating	B - s1, d0
5	OTHER PROPERTIES				
5.1	Release of Formaldehyde	EN 438-7.4.11.1	Classification	Rating	E1

Disclaimer : This Product Technical Sheet gives technical information relevant to the performance of product as tested by STYLAM and External certified testing agencies. STYLAM reserves the right to change product composition and characteristics at any time.

# CERTIFICATIONS



# CARE & MAINTENANCE



## STORAGE AND AIR CONDITIONING:

- Store Stylam compact laminate panels in a dry, clean, frost-free area as incorrect storage can lead to permanent deformation of the panels
- Keep panels in the original packaging wherever possible.
- Place pallets and panels on a level surface which provides full support.
- Remove steel straps if the panels are to be stored for a long time.
- All panels must be stacked horizontally on flat, stable supports and supporting panels and the panels must lie completely flat.
- Cover plates must always be left on the stack. The top cover should be weighted down.
- Panels are to be stored in closed rooms under normal climatic conditions.
- Climate differences on the two surfaces of a panel are to be avoided. Use intermediate layers of wood or plastic to ensure that the climatic effect is uniform on all sides of the panels.
- Do not place any moisture-sensitive (paper) layers between the panels. Place interleaving
- padding (slip-sheet or protective cardboard strips) between panels when stacking.
- Material should not be stored near exterior doors that may result in exposure to rain or temperature/humidity variations.
- Avoid storing in excessive heat/humidity extremes. All materials should be acclimated for a minimum of 72 hours before fabrication/installation.
- Prevent a film of moisture from forming between the panels.
- Remove any type of sticker / marking / coding immediately after installation of panels.

## CLEANING:

Stylam compact laminate panels have hygienic and sealed surface - it needs no major looking after. Cleaning is necessary under certain circumstances and is most easily done by using clean, warm water, clean clothes or rags, and soap (household cleaners available in shops). Avoid scouring and rough substances.

In case of Chemical Resistant Compact panels, kindly Use a damp cloth or sponge and a mild soap or detergent to clean the surface. Use of abrasive cleaners, powders, scouring pads, steel wool, sandpaper, etc., will damage the finish and can permanently reduce the chemical and stain resistance of the laminate. Good laboratory practice dictates that all chemical spills should be wiped up promptly. Stubborn stains may be removed by use of organic solvent or hypochlorite bleach, followed by wiping with a soft, damp cloth.

## SPECIAL CARE FOR PANELS WITH ADHESIVE PROTECTIVE FILM:

- The transport protection film is only for transportation and it must not be exposed to heat or direct sunshine.
- The protective films are designed for the temporary surface protection against dirt, scratches and tooling marks if any. They will not be able to provide protection against corrosion, humidity or chemicals.
- The laminates covered with the protective film shall be stored in a clean, dry place at room temperature (optimum 20 °C), avoiding weathering and UV exposure.
- The protective film must be removed from the surface of the laminates after the application and before putting into the use the finite element. In case of panels with the protective film on both sides, it must always be removed from both sides at the same time.
- Stylam Industries cannot be responsible for the misuse of the laminates covered with the protective film, nor for the consequences for non-recommended applications.



## **STYLAM INDUSTRIES LIMITED**

### **CORPORATE OFFICE**

S.C.O. 14, Sector 7-C,  
Madhya Marg, Chandigarh (UT)  
INDIA – 160019

**T:** +91-172-502 1666

**F:** +91-172-502 1495

**E:** [info@stylam.com](mailto:info@stylam.com)

**[www.stylam.com](http://www.stylam.com)**