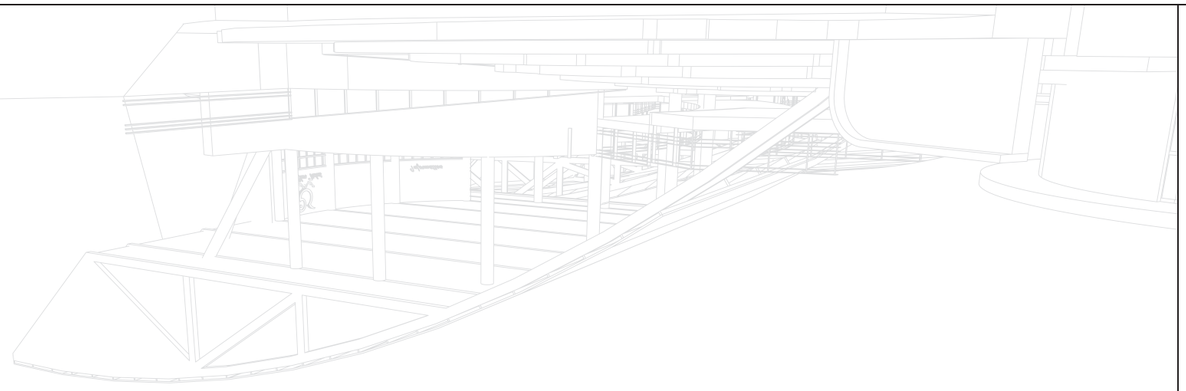

Signature® ECP

UV RESISTANT EXTERIOR PANELS
FOR FACADE + WALL CLADDING

SIGNATURE LAMINATES Private Limited

REGD. & CORPORATE OFFICE :
603, Silicon Tower, Law Garden,
Off. C. G. Road, Ahmedabad - 380 006, Gujarat, INDIA.
Phone : +91-79-2646 3294.
E-mail : info@signaturelam.com
www.signaturelam.com

IS 2046
CM/L-7506370

CONFORMS TO
EN 438-2

Signature® ECP

UV RESISTANT EXTERIOR PANELS
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CONFORMS TO
EN 438-2

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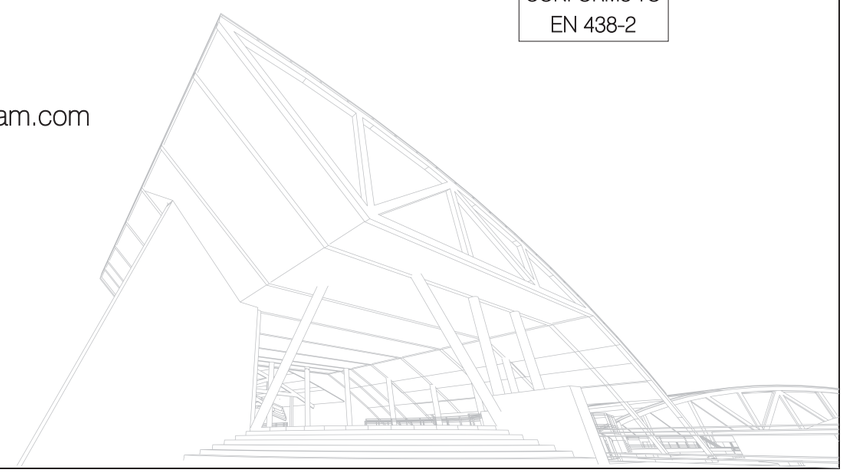


UV RESISTANT EXTERIOR PANELS
FOR FACADE + WALL CLADDING

ABOUT US

Signature UV resistant ECP is brought to you by Signature Laminates Pvt. Ltd., one of the leading manufacturers of High Pressure Laminates in India. This sturdy architectural panel is ideally suited for exterior cladding of ventilated facades & balconies, apart from many of its other applications.

The Signature Exterior panels are homogenous compact Panels with a high UV surface protection for external use. The surface & core of the panel are impermeable & therefore not affected by rain & condensation. The decorative outer surface of the panel is highly resistant to exposure to sunlight making it a perfect fit for facade applications.

Signature Exterior is offered in size 2440 x 1220 x 6 mm thickness. Higher thickness can be offered against specific requirement. The product conforms to EN 438-2. Higher thickness of 8 mm and 10 mm can also be offered against specific applications.

The product conforms to EN 438-2.

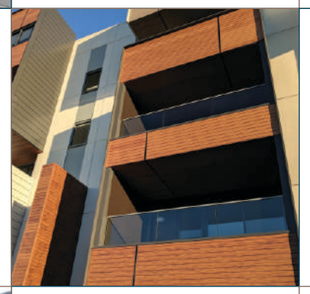
Signature UV Resistant Exterior Cladding Panel has been tested for its UV Resistance Properties by a leading German Test House and certified its conformity to EN 438-2.

Signature® ECP
UV RESISTANT EXTERIOR PANELS FOR FACADE + WALL CLADDING

SIGNATURE ECP - RECOMMENDED APPLICATION

Signature Exterior Compact Panels are offered in a very wide range of solids, wood effects, abstracts, crack wood, stone effects, etc. The product offers abundant scope for Colour combinations adding aesthetics to the building. We can also offer a wide range of unique & exciting texture effects to give an appealing look to your exteriors.

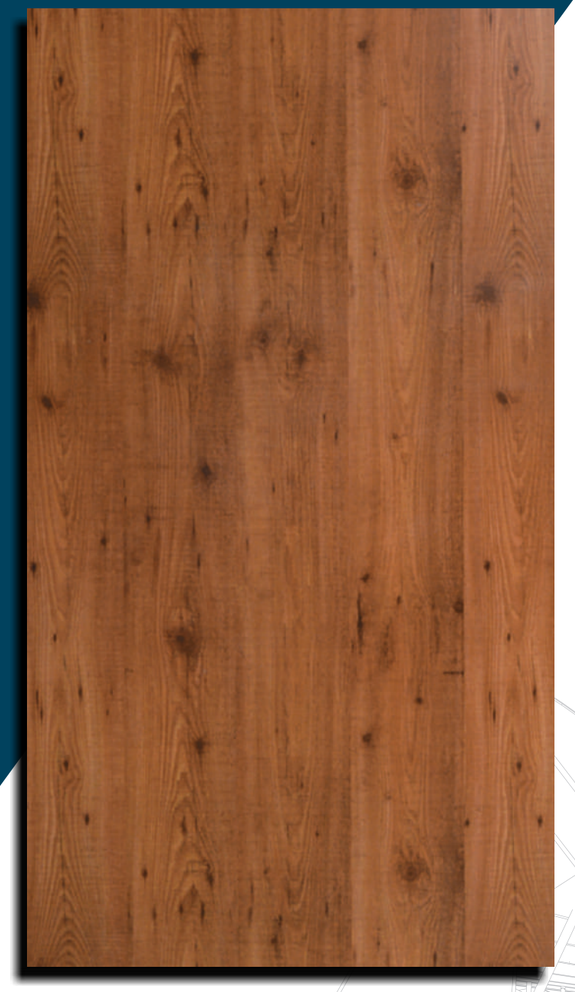
Listed below are some of the applications signature exterior cladding panels can be used for almost imaginable exterior application:

FACADE CLADDING		BALCONY PANELING OR CLADDING	KNOCK DOWN SHOPS, OFFICES, CABINS
	EXTERNAL CLADDING OF COMMERCIAL OR RESIDENTIAL BUILDINGS.		FENCES, BALCONY RAILING & COMPOUND WALL RAILING
ENTRY GATES FOR BUNGALOWS, COMMERCIAL BUILDINGS, FACTORIES, ETC		EXTERNAL WALLS IN PREFABRICATED BUILDINGS	OUTDOOR FURNITURE
TRAFFIC KIOSKS	EXTERNAL CLADDING FOR SHOPPING MALLS, MULTIPLEXES, SCHOOLS, STADIUMS, THEATRES, AUDITORIUMS, ETC.		BUS SHELTERS

SIGNATURE ECP - EXTERIOR CLADDING PANEL ADVANTAGES

- UV Resistant. No colour fading
- Water, moisture, heat and fire resistant
- Does not melt or drip in the event of fire
- High impact resistance
- Scratch resistance
- Wear and tear resistant
- Good dimensional stability
- Does not need edge banding
- Non-corrosive and chemical resistant
- Does not warp
- No asbestos or metal contents in the composition of material
- Easy to install & easy to dismantle
- Strong, self-supporting, durable and long lasting
- Does not need any maintenance

BENEFITS OF UV RESISTANT COMPACT PANELS



DOUBLE HARDENED

IMPROVES SOUND INSULATION

IMPACT RESISTANT

OPTIMAL LIGHT-FASTNESS

CHEMICAL RESISTANT

EASY TO CLEAN

EASY TO INSTALL

SCRATCH RESISTANT

WATERPROOF

FIRE RETARDANT FREE FROM FIRE

Signature ECP

UV RESISTANT EXTERIOR PANELS
FOR FACADE + WALL CLADDING

ECP 101

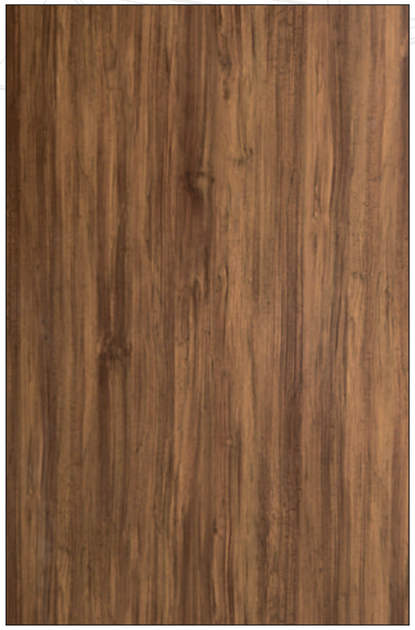
ECP 102

ECP 103

ECP 104

Signature ECP

UV RESISTANT EXTERIOR PANELS
FOR FACADE + WALL CLADDING

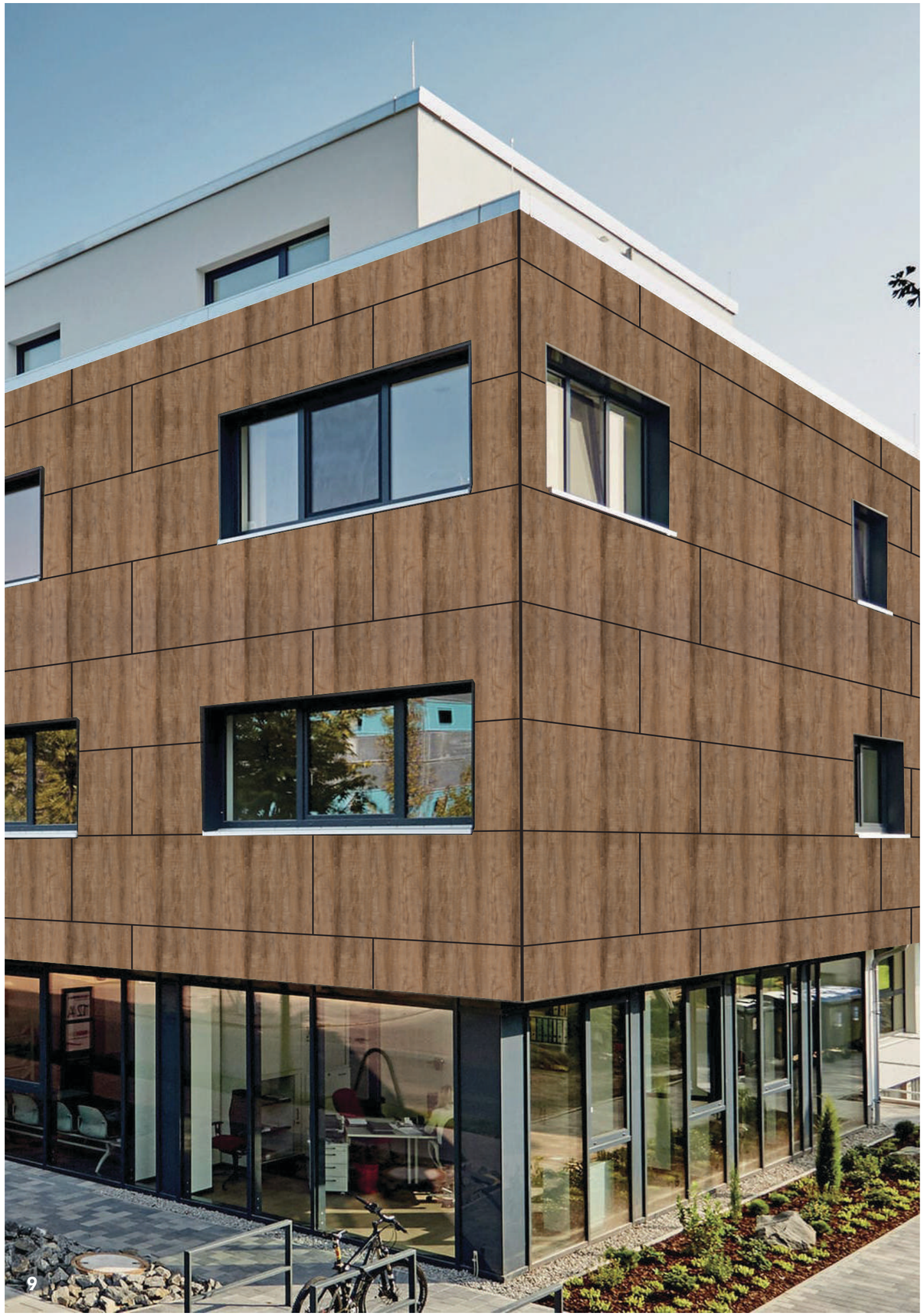


ECP 105

ECP 106

ECP 107

ECP 108



Signature ECP

UV RESISTANT EXTERIOR PANELS
FOR FACADE + WALL CLADDING

ECP 109

ECP 110

ECP 111

ECP 112

Signature ECP

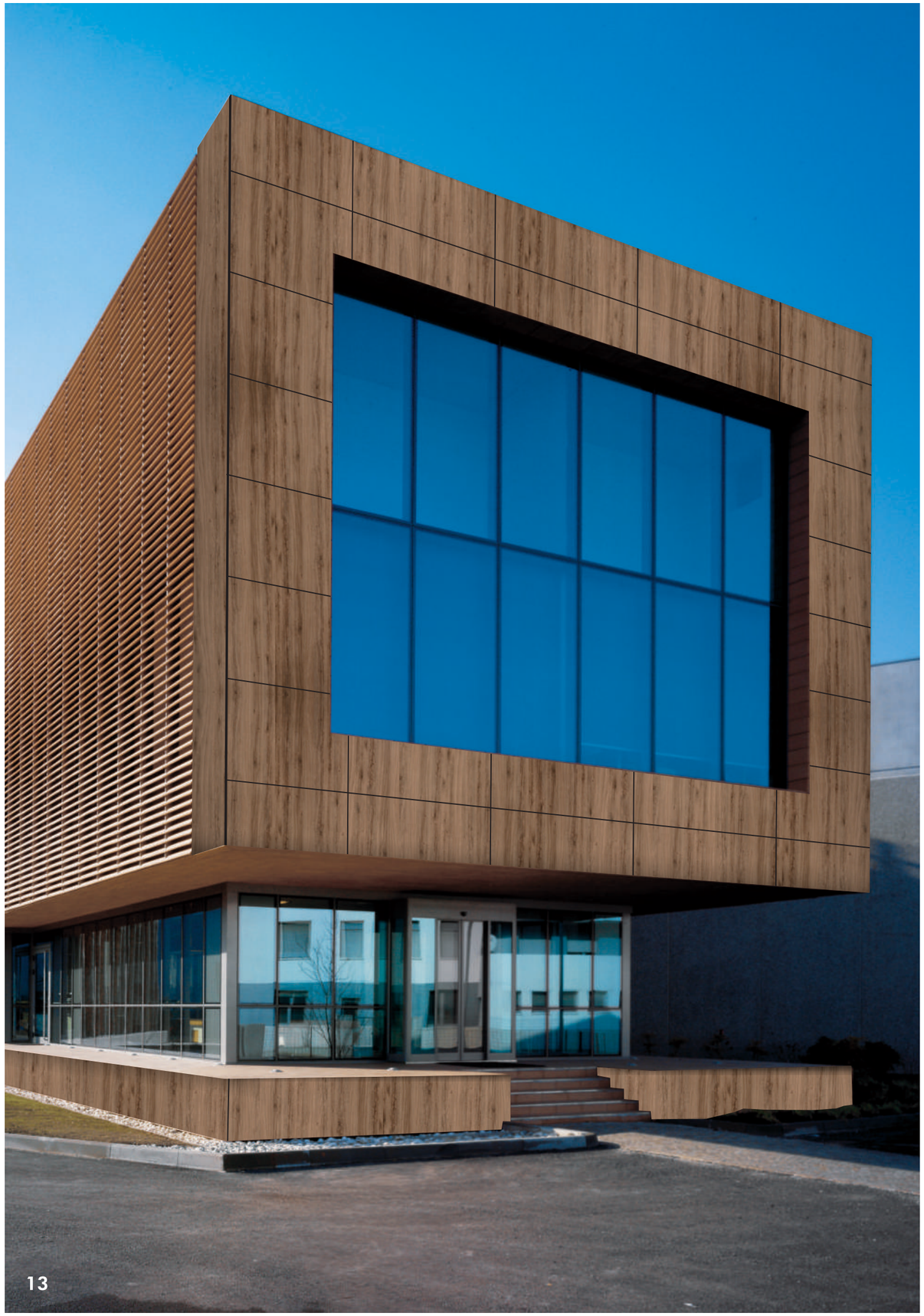
UV RESISTANT EXTERIOR PANELS
FOR FACADE + WALL CLADDING

ECP 113

ECP 114

ECP 115

ECP 116



Signature ECP

UV RESISTANT EXTERIOR PANELS
FOR FACADE + WALL CLADDING

ECP 117

ECP 118

ECP 119

ECP 120

Signature ECP

UV RESISTANT EXTERIOR PANELS
FOR FACADE + WALL CLADDING

ECP 121

ECP 122

ECP 123

ECP 124

Plain Colours

Signature ECP
UV RESISTANT EXTERIOR PANELS
FOR FACADE + WALL CLADDING

ECP 201

ECP 203

205 ECP

ECP 209

ECP 207

ECP 206

ECP 204

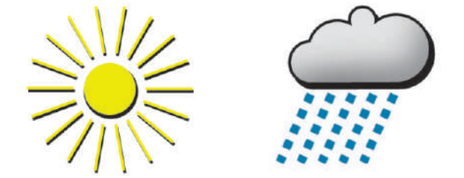
ECP 208

ECP 202

SIGNATURE ECP – SPECIFICATIONS

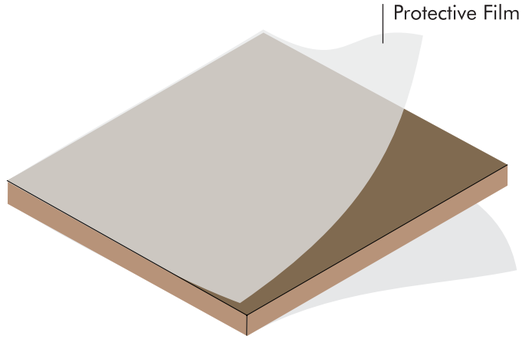
SPECIFICATIONS	
SIZE	1220x2440 mm (Available in Selected Colors)
THICKNESS	6, 8 and 10 mm.
DECOR	Same decor both sides / Single side as required
FINISH	MATT FINISH (MT) / SUEDE FINISH (SF) / ALSO EXCLUSIVE TEXTURE FINISHES
RANGE	As shown in the folder (Special colors available on request)
STANDARDS	Conforming to EN 438-2

Important Note:
The designs shown in this folder are photographic images. Due to printing limitations, the images will have slight colour variation from the original design. We suggest you call for physical sample of the short-listed designs prior to your order.



Signature exterior panels are prone to dimensional changes due to weather changes and relative humidity. Shield the protective film from solar radiation and other heat sources to avoid damage.

A pre-conditioning of 72 hours on site is required.



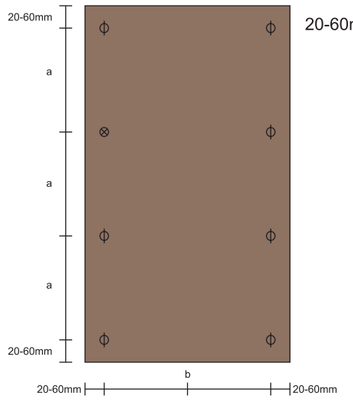
- The protective film should be removed from both sides simultaneously before installation.
- Contains pure phenolic core.
- Varied range of colors available with surface protection.

GUIDELINES FOR INSTALLATION

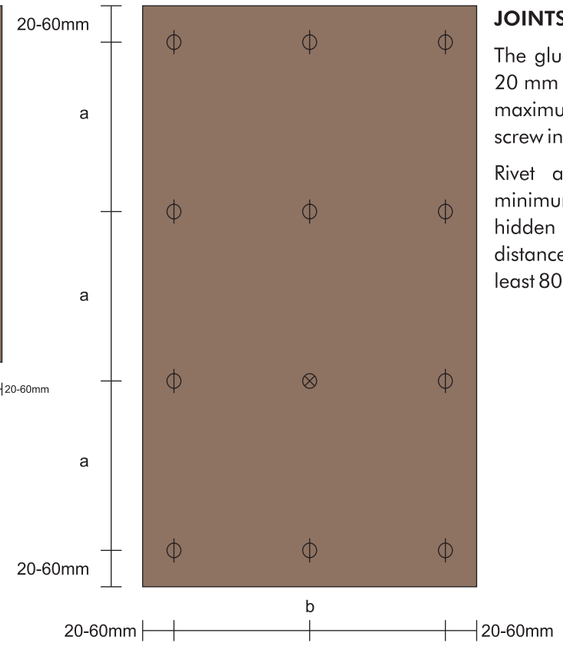
Signature ECP
UV RESISTANT EXTERIOR PANELS FOR FACADE + WALL CLADDING

SIGNATURE ECP - GUIDELINES FOR INSTALLATION SYSTEMS

SPECIFICATION OF SHEETS			
THICKNESS OF SHEETS	6 mm	8 mm	10 mm
MINIMUM DISTANCE OF THE HOLES TO EDGE	20-60 mm	20-80 mm	20-100 mm
MAXIMUM DISTANCE BETWEEN THE HOLES-WIDTH	450 mm	600 mm	750 mm
MAXIMUM DISTANCE BETWEEN HOLES-LENGTH	550 mm	750 mm	900 mm



Single Span Panel



Double Span Panel

JOINTS

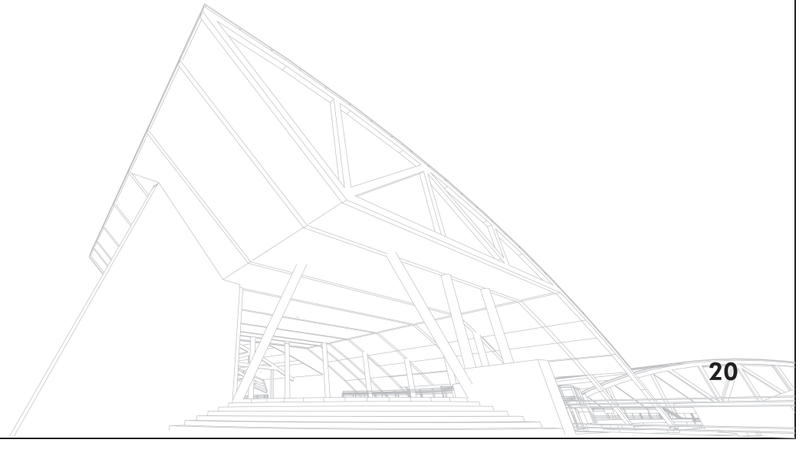
The glue should be applied maximum 20 mm from the edge in continuity and maximum 50 mm from the edges at screw installations.

Rivet and screw distance must be minimum 20 mm in between and for hidden screw and hang systems, the distance between screws must be at least 80 mm.

RIVET AND SCREW SYSTEM

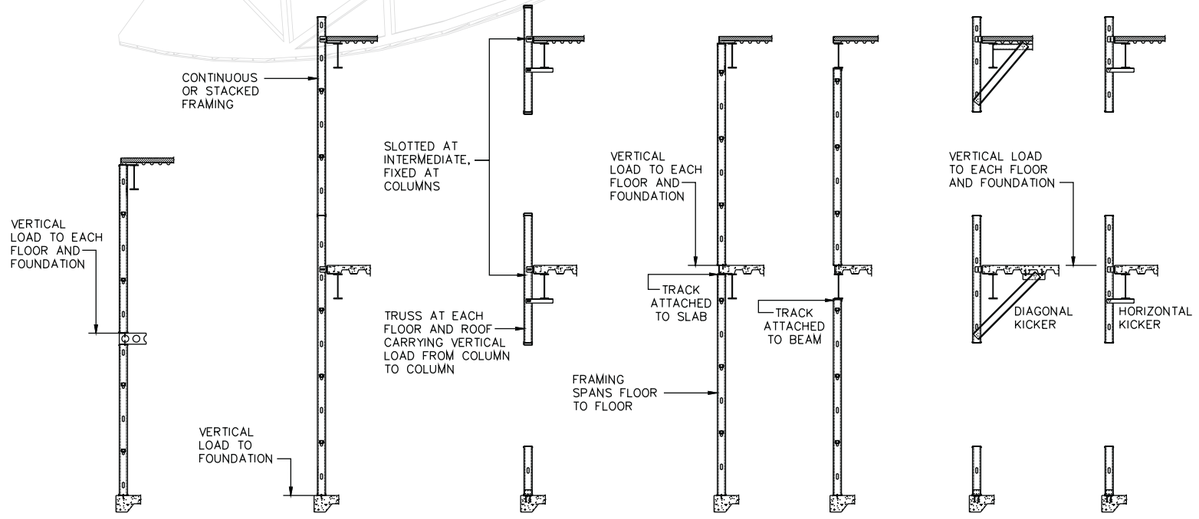
Riveted and screwed systems is suitable for 6mm to 10mm panels. This system is applied to high-rise buildings or used as supporting gluing systems to provide extra solidity at the time of installation.

Joint spaces and vertical profile space are same with gluing systems. Open joint, halved joint and tongued-and-grooved joints are mostly used in joint spaces.



GUIDELINES FOR INSTALLATION

CLADDING SUPPORT FRAMING CATEGORIES



LOAD–BEARING FRAMING
(FRAMING DOES NOT DEFLECT)

BYPASS FRAMING
(FRAMING DOES NOT DEFLECT)

COLUMN–SUPPORTED FRAMING
(FRAMING DOES NOT DEFLECT)

INBOARD

OUTBOARD

SPANDREL FRAMING
(FRAMING DEFLECTS)

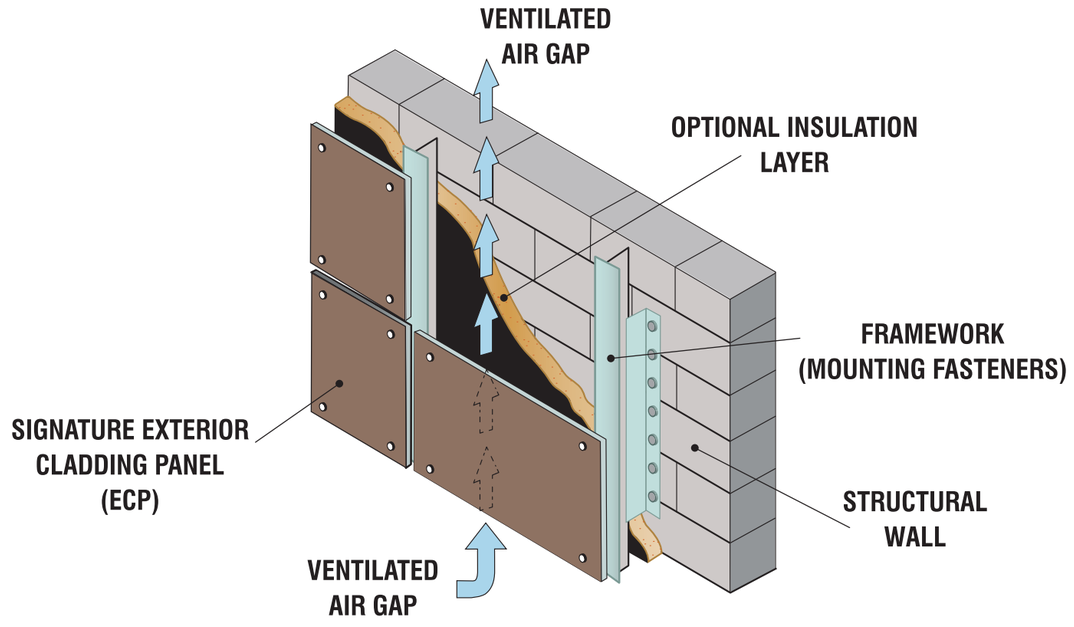
UV RESISTANT EXTERIOR PANELS
FOR FACADE + WALL CLADDING

SIGNATURE ECP - GUIDELINES FOR INSTALLATION SYSTEMS

AIR CIRCULATION

An efficient air circulation must be secured between Signature Exterior Cladding Panels and the surface or the coating of the building. The blank grouting spaces allowed for ventilation between the plates should not be filled with any material.

An efficient air circulation must be provided from the ground level of the plate to the top edge. A minimum of 50 cm^2 space is required for every 1 meter width. If no air ventilation gap is reserved at the construction framework, deformation will occur on the exterior plates.



ENVIRONMENT COMPATIBILITY

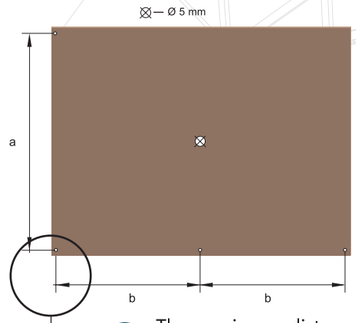
Signature UV Resistant Cladding Panels are not hazardous to health and do not pollute the environment in any ways. There are made up of 70% cellulose fibres and 30% thermosetting resins and does not contain asbestos or heavy metals. Signature cladding panels do not emit any gases, fumes, solvents or liquid substances.

A very high percentage of raw materials used in the manufacturing of Signature cladding panels are renewable, following stringent environmental principles and criteria.

Industrial wastes and residues can be stored and disposed off in the same way as urban waste products in controlled waste disposal sites in accordance with national and local legislation.

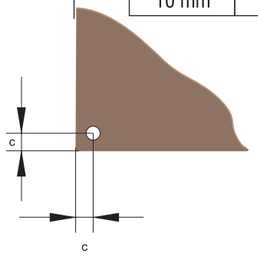
GUIDELINES FOR INSTALLATION

SIGNATURE ECP - DRILLING SPECIFICATIONS



1 The maximum distance between screws/rivets should depend on the thickness of the Exterior Cladding Panels.

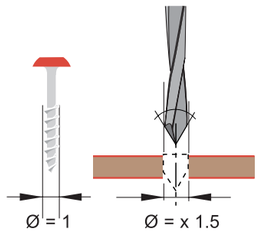
	a	b
	2 fixings in one direction	3 or more fixings in one direction
6 mm	450 mm	550 mm
8 mm	600 mm	750 mm
10 mm	750 mm	900 mm



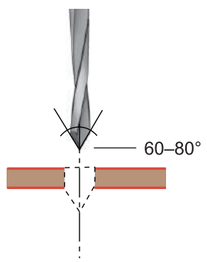
2 Minimum and maximum distance between edge of the panel and hole.

	c	c
	Minimum	Maximum
6 mm	20 mm	60 mm
8 mm	20 mm	80 mm
10 mm	20 mm	100 mm

3 Drill 1.5 x the diameter of the screw/rivet to allow space for the Exterior Cladding Panels to move.



4 Use hardened steel drill bits for ease of installation of the Exterior Cladding Panels.



UV RESISTANT EXTERIOR PANELS
FOR FACADE + WALL CLADDING

SIGNATURE ECP - SAWING SPECIFICATIONS

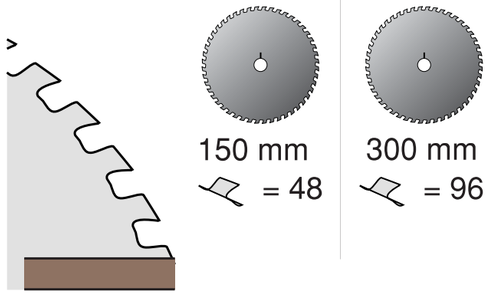
The following tools are to be used to machine the exterior grade compacts:

- **Saw, router, Spindle Moulder**
- **Drill**
- **Digital Control Machine**

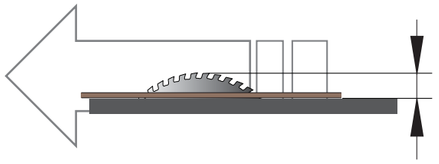
For machining of exterior grade compact panel, sharp carbide or diamond tipped tools are required. Depending on the tools that are used preliminary tests are necessary in order to define the tool characteristics, feed rates and rotation speeds to avoid any local heating and to overcome defective machining & installations.

It is recommended that protective film is not removed until after machining or until installed, if possible. If it is necessary to remove the film during machining, then only do this along the edge of the board.

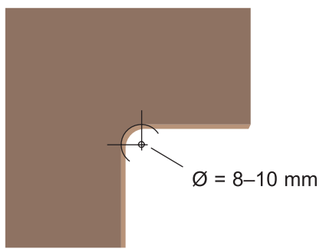
1 Use a TCT or PCD saw blade for machining of exterior cladding panels.



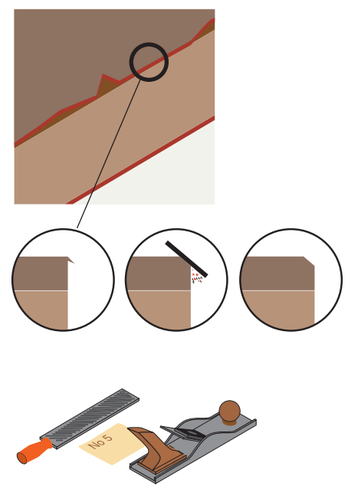
2 Optimise feed and height for smooth cuts of exterior compact panels.



3 All internal corners and square cut-outs must be in radius in order to achieve perfection in sawing process.



4 Deburr the edges with a filer, sandpaper or plane.



GUIDELINES FOR INSTALLATION

SIGNATURE ECP - FACADE CLADDING SPECIFICATIONS

SUGGESTED APPLICATION METHOD FOR EXTERIOR CLADDING:

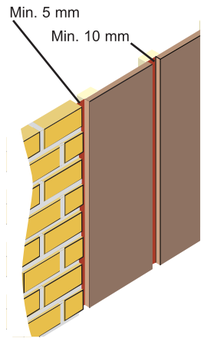
Signature Exterior Cladding Panel is a user friendly & versatile material. It comes in a wide range of standard colours. These panels can give an everlasting new look to your building exteriors. It is tough & durable. It is fire resistant, does not melt, drip, deform or explode in the event of fire. It is not affected by rodents, termites or micro organisms. Signature Exterior Cladding Panels can be cut to required sizes at site. Always use sharp saw blades made of hard metal. Worn out tools can cause chipping and poor cuts. Large saw blades give better results. To avoid stress cracks, all cut outs must have rounded internal corners of minimum 8-10 mm.

The signature exterior cladding panels can easily be installed using metal screws & extruded aluminum sections for concealed installation. Please ensure that there is a ventilated space of at least 25 mm between the panel & the wall to prevent tension in the panel, condensation and moisture. Openings or ventilation gaps are to be provided at the top & bottom of each panel to allow air circulation. These openings may be covered with a fine metal mesh.

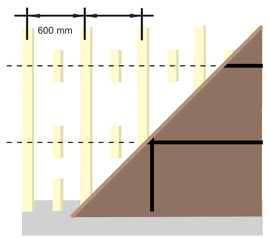
SIGNATURE EXTERIOR – FOR VENTILATED FACADES.

While installing the Panels for facade application, please ensure that:

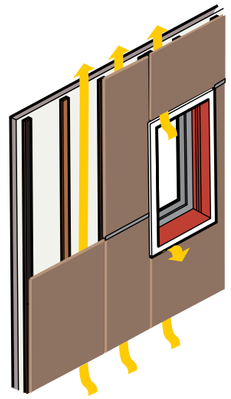
- An air gap of at least 25 mm is provided behind installed sheet to prevent tension in the material and condensation & moisture permeating the main structure.
- Opening or ventilation sections are provided at the top and bottom of the facade to permit air circulation. Make sure the air gap is not blocked next to windows etc. There must be a ventilated space of at least 25 mm behind the panel.
- We recommend that you cover the openings with a fine metal mesh.



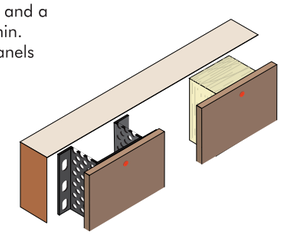
1 The distance between a solid object and a signature cladding panel must be min. 5 mm. The distance between two panels must be min. 10 mm.



2 A distance of max. cc 600 mm between beams is recommended. See information regarding distance between screws on Page 23. Install a support midway between the studs at horizontal joints and at the bottom.



3 A minimum of 25 mm air circulation space must be maintained behind sheets. This space should not be closed off at doors and window sections.



4 Signature cladding panels can be installed on metal supporting structures with visible or hidden fixing systems.

UV RESISTANT EXTERIOR PANELS FOR FACADE + WALL CLADDING

SIGNATURE ECP - CLEANING, STORAGE AND WARRANTY

CLEANING:

The surface can be cleaned by wet mopping. Use a clean cloth & general purpose detergent diluted with mild warm water. Oil, grease, paint etc. can be removed with xylene or with isopropyl alcohol. After using these chemicals, please clean the surface thoroughly with mild warm water. Abrasive materials like steel wool, scouring pads, hard detergents or cleaning agents with solid abrasive contents should never be used to clean Cladding Panel surface. (Drawing for cleaning work)

SIGNATURE EXTERIOR - LONG LIFE

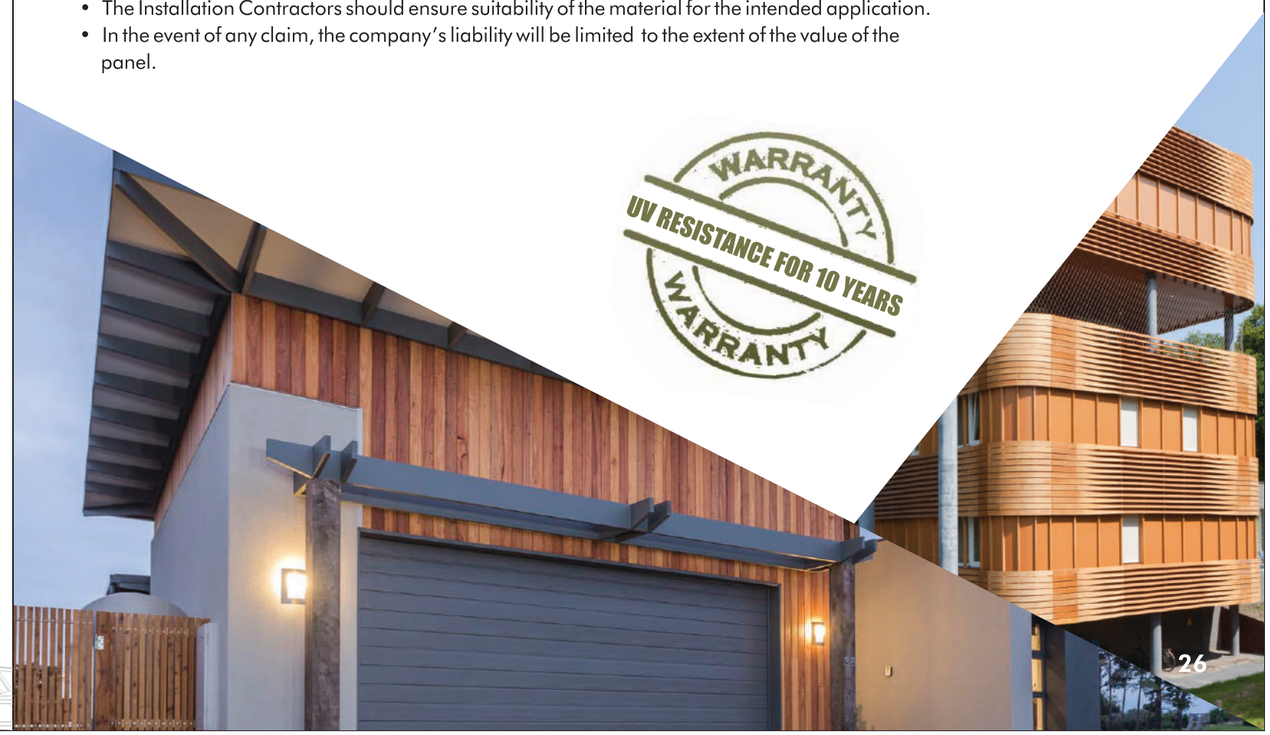
The life span of sturdy, weather & UV resistant Signature Exterior Cladding panel is expected to last more than 10 years under most severe climatic conditions. Does not deform. No fading or aging.

STORAGE & HANDLING OF COMPACT PANELS.

- The Cladding Panels are to be stored horizontally. Vertical storing for longer periods can deform the sheets as deformation can take place. We recommend flat stable thick boards to be placed at the top & bottom of the stack.
- The storage area should have proper ventilation & should be free from water, dirt & moisture.
- In order to avoid any surface damages, please ensure the surface of panel is free from any foreign particles.
- While loading & unloading, never push or drag the panel as it may damage the design surface. The panels should always be lifted by hand.

PRODUCT WARRANTY:

- Signature warrants the quality of its products within the scope of the values indicated in this brochure.
- Signature is not liable for any defects in the working or processing of the substrate or installation as we cannot control the installation work.
- Installation Contractors should follow the necessary building regulations.
- The Installation Contractors should ensure suitability of the material for the intended application.
- In the event of any claim, the company's liability will be limited to the extent of the value of the panel.



ACCESSORIES FOR CLADDING

Cutting Machine

Rivet Gun

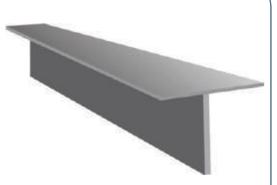
Drilling Machine

Aluminum C+ Rail

U Bracket

L Bracket

Silicone Tube



T-Section

Box Section

Dead Load Bracket

Wind Load Bracket

Industrial Tape

Mouth Piece

Fastener

Nut Bolt

Self Drilling Screw

Rivets

Signature ECP

UV RESISTANT EXTERIOR PANELS FOR FACADE + WALL CLADDING

SIGNATURE EXTERIOR CLADDING PANELS TECHNICAL SPECIFICATIONS

EXTERIOR GRADE CLADDING LAMINATE I SIZE : 2440 mm x 1220 mm			
Sr.No.	Properties	EDF Grade Specification as per EN 438-2	Values
1	Thickness (mm.) (max.)		
	5.00 ⩽ t ⩽ 8.00 (mm.)	6.00 +/- 0.40 mm	6.15 mm.
2	Length (mm.)	2440.00 + 10.00 / -0.00 mm.	2441.00 mm.
3	Width (mm.)	1220.00 + 10.00 / -0.00 mm.	1221.00 mm.
4	Edge Straightness mm. (max.)	1.50 mm/m	0.90 mm/m
5	Edge Squareness mm. (max.)	1.50 mm/m	0.80 mm/m
6	Flatness (mm.) (max.)		
	2.0 ⩽ t ⩽ 6.00 mm.	8.00 mm/m	4.00 mm/m
	6.0 ⩽ t ⩽ 10.00 mm.	5.00 mm/m	2.50 mm/m
	t ⩾ 10.00 mm.	3.00 mm/m	1.30 mm/m
7	Flexural Modulus (min.)	9000 Mpa	13966 Mpa
8	Flexural Strength (min.)	80 Mpa	114 Mpa
9	Tensile Strength (min.)	60 Mpa	66 Mpa
10	Density gm./ cm^3 (min.)	1.35 gm / cm^3	1.45 gm/cm^3
11	Resistance to impact by large diameter ball,		
	(a) Drop Height mm. (min.)		
	2.00 ⩽ t ⩽ 5.00 mm (t=nominal thickness)	1400.00 mm	1600.00 mm
	t ⩽ 5.00 mm	1800.00 mm	2000.00 mm
	(b) Indentation diameter mm. (max.)	10.00 mm	6.00 mm
12	Resistance to wet conditions		
	(a) Mass Increase (%) max.		
	2.00 mm ⩽ t ⩽ 5.00 mm. (t=nominal thickness)	10%	4%
	t ⩽ 5.00 mm	8%	3%
	(b) Appearance not worse than	Rating 4	Rating 5
13	Dimensional stability at elevated temperature, 2.00 mm ⩽ t ⩽ 5.00 mm (t=nominal thickness)		
	(a) Longitudinal % max.	0.40%	0.25%
	(b) Transverse % max.	0.80%	0.45%
	t ⩾ 5.00 mm.		
	(a) Longitudinal % max.	0.30%	0.20%
	(b) Transverse % max.	0.60%	0.40%
14	Resistance to climatic shock		
	(a) Appearance	Rating 4	Rating 4
	(b) Flexural Strength Index min.	0.95	1.10
	(b) Flexural Modulus Index min.	0.95	1.50
15	Resistance to artificial weathering Including Light Fastness	After 650 MJ/m^2 radiant Exposure (3000 hrs)	3000 hrs passes
	(a) Gray Scale rating (not worse than)	Rating 3	Rating 4
	(b) Appearance (min.)	Rating 4	Rating 4
16	Resistance to UV light	After 1500 hrs exposure	1500 hrs passes
	(a) Gray Scale rating (not worse than)	Rating 3	Rating 4
	(b) Appearance (min.)	Rating 4	Rating 4
17	Spread of Flame	Class 1	Class 1

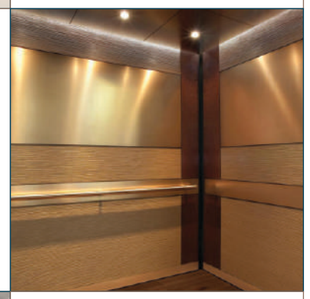
REMARK:
E (Exterior Grade)
D (Severe Use)
F (Flame Retardant Grade)

ADD ON PRODUCTS

SIGNATURE - FIRE RETARDANT PANELS

We also manufacture superior grade Signature Fire Retardant Compact Panels in different thicknesses. In the event of fire, it does not spread flame, does not melt or drip, and does not emit smoke or any toxic gases. Because of its FR property, this unique product is strongly recommended for the following application areas.

FIRE RETARDANT

	**Interiors of transport vehicles like ship, train, bus, etc**		**Hospital interior**
Main doors and auditoriums		**Paneling in lifts**	
	**Public utility buildings**		**Airport interior**
Clean rooms in pharmaceutical industries or R&D labs		**Common passages in buildings**	

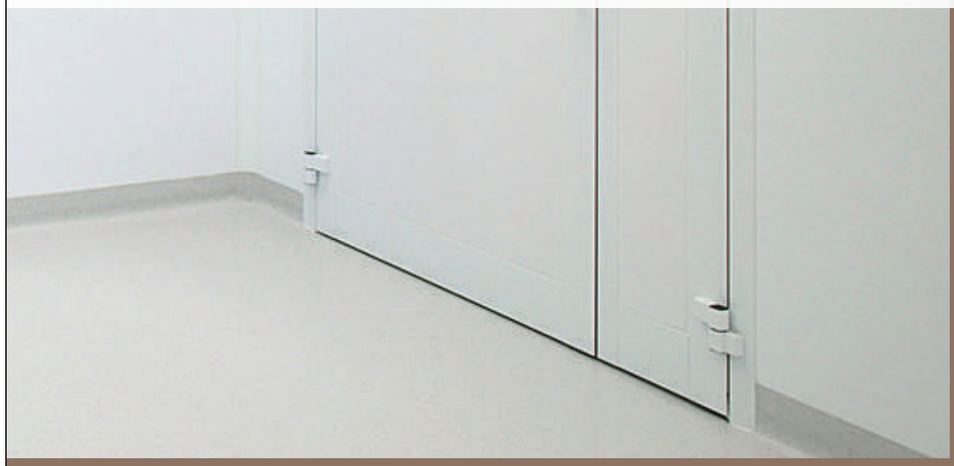
ADD ON PRODUCTS

SIGNATURE - INTERIOR GRADE COMPACT PANELS

Signature also offers 6.0 mm & other thicknesses in Interior Grade (non UV treated) Compact Panels for a variety of applications like indoor paneling, partitions, furniture applications, etc. Some of the suggested applications are as under:

- Bath & toilet cubicle
- Interior walls cladding
- School furniture – desks, benches, tables, Wall partitions, etc.
- Partitions, paneling & other office furniture
- Work station furniture
- Factory furniture
- Storage racks & furniture
- Laboratory furniture
- Hotel & restaurant: Bar counter, Reception lobby, paneling & furniture, etc.
- Kitchen furniture
- Hospital furniture
- Interior of bus/Truck body
- MRI/CTC scan beds
- ATM counters

Signature Compact Panel can also be offered in a variety of unique & appealing Texture Finishes.



Caution : The Interior grade panels offered by the company are recommended for use in the interior applications and not to be used for exterior applications.