

Applications



APPLICATIONS

FASCIA Exterior Cladding panels are extremely durable with international styling and a wide range of colours available in both horizontal and vertical designs. Its excellent technical properties make it suitable for the building industry as an ideal alternative to traditional materials.

- Wall and facade linings
- Cladding of exhibition buildings
- Sporting and entertainment complexes
- Decoration of commercial sites
- Residential dwellings
- Silhouette profiles
- Fences
- Facade Claddings
- Balcony Claddings
- Partitions
- Rear ventilated facades
- Ceilings
- Outdoor furniture
- Public facilities
- Playground facilities
- Sports facilities
- Sun protection
- Business entry portals
- Functional constructions
- Attic Claddings
- Awnings

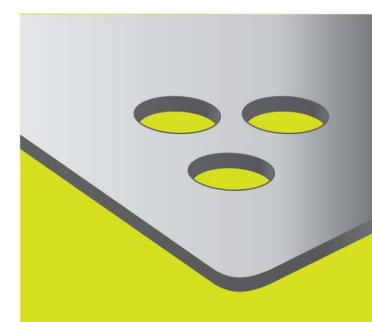
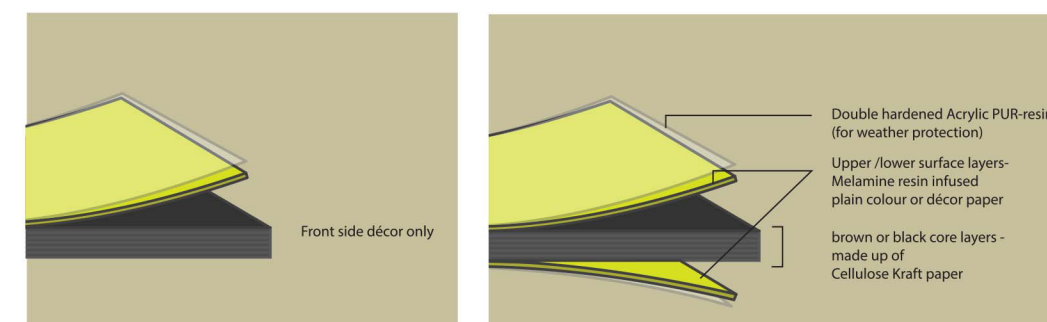
FASCIA EXTERIOR CLADDING

FASCIA Exterior Cladding High Pressure Laminate (HPL) panels have a decorative surface that is suitable for exterior applications. Special quality resins provide extremely effective weather protection to external facades. These HPL are produced in lamination presses under high pressure and temperature. They are resistant to colour fading and are weather-proof with special protection against inclement weather according to standard EN438:2005 Part 6.

FASCIA CLASSIC

FASCIA CLASSIC Exterior panels are extremely durable high-pressure laminates (HPL) that are produced in lamination presses under great pressure and high temperature. Excellent weather protection is achieved with protective coating consists of double hardened acrylic polyurethane resins.

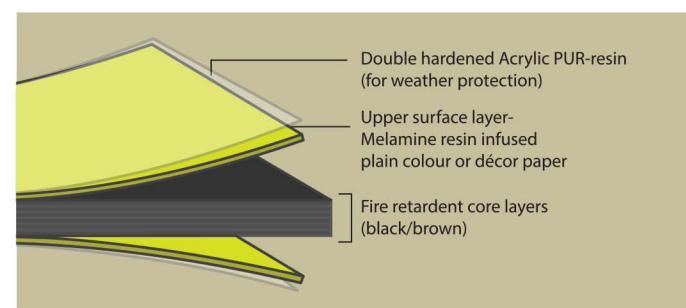
FASCIA CLASSIC Exterior panels come with these variants:
1) Front-side décor only 2) Both side décor 3) Black core 4) Brown core



FASCIA FIRE RETARDENT

FASCIA FIRE RETARDENT Exterior panels have extreme fire retardant quality which make them difficult to ignite and have a low spread of flame. The evacuating time in case of fire is therefore prolonged. Produced in lamination presses under great pressure and high temperature, the panels have excellent weather protection achieve with protective coating consists of double hardened acrylic polyurethane resins.

FASCIA FIRE RETARDENT Exterior panels come with these variants: 1) Front-side décor only 2) Both side décor 3) Black core 4) Brown core



PANEL FORMATS



ATTRIBUTES



QUALITY

CE MARKING

In compliance with EU Construction Products Regulations 305/2011, the notified Body ITC Czech Republic has certified the FASCIA Exterior Cladding panels to the requirements laid down in Annex ZA of the product standard EN438-7:2005. We are the only Indian manufacturer and among very few in the world to achieve this certification.

EDGE QUALITY

Edge chipping of up to 3 mm on each side is permissible as per EN 438-6, Clause 5.2.4.3

TOLERANCE

All panels conform to standard dimension tolerance of +10 - 0 mm as per EN438-6, Clause 5.3. The tolerance on thickness and flatness of both Double sided decor and Single side decor panels is as per the below table, which has been derived from EN 438-2. (Refer the table on opposite page)

GENERAL PROPERTIES

- Resistant to weathering as per EN ISO 438-2 and EN ISO 4892-3
- Having light fastness as per EN ISO 4892-3
- Mechanically sturdy having high Flexural tensile strength as per EN ISO 178
- High screw holding strength as per EN 438-7
- Low Formaldehyde Emission as per EN 717-1
- Suitable for all exterior applications
- Available in wide range of attractive colours and textures
- Provides healthy atmosphere as it does not support micro-organic growth
- Easy to clean
- Easy to install
- Resistant to termites
- Self-supporting panels

SPECIAL PROPERTIES

Aging performance and weather resistance

- FASCIA Exterior Cladding panels can be exposed to combined action of sunlight and atmospheric agents such as rain, hail and wind deposits.
- Exhaust fumes and acid rain can have mild effect on surface.
- Not affected by thermal shock and maintains its physical & mechanical properties.
- Extreme climate changes such as from -10°C to +60 °C or from a dry climate to 90% relative humidity do not affect the appearance or the properties of the panel.

Dimensional Stability

- With due conditioning at site, moderate dimensional variation due to the effects of atmosphere; it contracts in low humidity and expands in high humidity environments.
- The compactness of FASCIA Exterior Cladding panels provide excellent mechanical properties such as flexural, tensile, compressive and impact strength. The homogeneity and high density of the panels ensure maximum retention of screws or inserts fasteners.

Property	Test method (EN 438-2, Clause No.)	Thickness Range (T=nominal thickness)	Tolerance (maximum variation)
Thickness	5	2 ≥ T ≤ 3	mm± 0.20 mm
		3 ≥ T ≤ 5	mm± 0.30 mm
		5 ≥ T ≤ 8	mm± 0.40 mm
		8 ≥ T ≤ 12	mm± 0.50 mm
		12 ≥ T ≤ 16	mm± 0.60 mm
		16 ≥ T ≤ 20	mm± 0.70 mm
		20 ≥ T ≤ 25	mm± 0.80 mm
Flatness	9	2 ≥ T < 6 mm	maximum deviation 8 mm/m max. deviation
		6 ≥ T < 10 mm	5 mm/m max. deviation
		10 ≥ T < 20 mm	3 mm/m max. deviation

INSTRUCTION FOR PANEL FIXING

Method 1- With Reverts Panel Fixing

Expansion Clearance

The most important characteristics of FASCIA Exterior Cladding panels are that they marginally change their size in relation with the changes in relative humidity. They normally expand when they absorb moisture and marginally shrink when they lose moisture. You must provide proper clearance between the panels during fixing process to compensate for this expansion and contraction, commonly referred as the dimensional change.

You may consider this clearance as per below basic thumb rule.

Panel length = a mm, Panel width = b mm

$$\text{Expansion clearance} = \frac{a \text{ or } b}{400}$$

Mounting of panels with screws on aluminum sub-structure

SUB-STRUCTURE

The dimensions and size of aluminum substructure can be considered in accordance with the relevant national standards. The aluminum substructure generally consists of vertical support profiles/hollow sections which are mounted on the wall using angle brackets and rivets.

Metal sub-constructions normally change their dimensions with differences in temperature. The consideration of change in dimensions of FASCIA Exterior Cladding panels in relation with changing relative humidity is done by the concept of Expansion clearance explained above. These changes in size of sub-construction and the cladding material can also be opposite to each other. Hence while installing the panels due attention must be paid to the required expansion clearance. Due to the material properties of FASCIA Exterior Cladding panels, fixed points and sliding points need to be made to fix the panels.

FIXED POINTS

Fixed points are used for uniform distribution (halving) of the expansion and the shrinkage movements. The diameter of the drill hole in FASCIA Exterior Cladding panels has to be made from 5.0 to 6.0 mm.

SLIDING POINTS

The diameter of drill hole in FASCIA Exterior Cladding panels must be 8 mm, drilled larger than the diameter of the fastening, depending on the required expansion clearance. This can be maintained as the shaft diameter of the fastening plus 2 mm for every meter of cladding material starting from the fixed point. The head of the fastening must be big enough so that the drill hole in Cladding panels is always covered.

The table below is depicting maximum spacing of fastening for single and double span panels.

Panel Thickness	Maximum Spacing of fastening for single span	Maximum Spacing of fastening for double span
4 mm	300 mm	500 mm
6 mm	400 mm	600 mm
8 mm	500 mm	700 mm

Method 2 - Lap Siding Panel Fixing

The Lap Siding Fixing Method has the advantage of being a very attractive system of panel fixing. With pre-fabricated FASCIA Exterior Cladding panels for the lap sidings, it is easy to design robust and modern facades.

MOUNTING INSTRUCTIONS

1. Preparing the substructure

FASCIA Exterior lap siding panels are installed using mounting clips fixed to a sub-structure of vertical wooden slats. Each slat must be at least 50 mm wide for a single mounting clip, or 75 mm wide where two panels join to allow enough space for two mounting clips side-by-side. The gap between each slat should not exceed 500 mm as applicable to low buildings of up to 8 m height.

The panels are installed starting from the bottom. First of all, fit a horizontal base bar. Now fit the first row of mounting clips so they rest on the bar. Make sure you fit 2 mounting clips at each vertical joint between panels.

2. Installing the first row of panels

Place the groove along the lower edge of the FASCIA Exterior lap siding panels onto the mounting clips. Secure the panels in place by fixing mounting clips along the top edge of each panel. The panel above overlaps the first row of panels by approximately 25 mm. Fit a screw next to the top middle mounting clip on each panel. This is designed to stop the sideways shifting of panels.

3. Vertical joints

A slat for fixing the mounting clips must be located at each vertical joint. Two

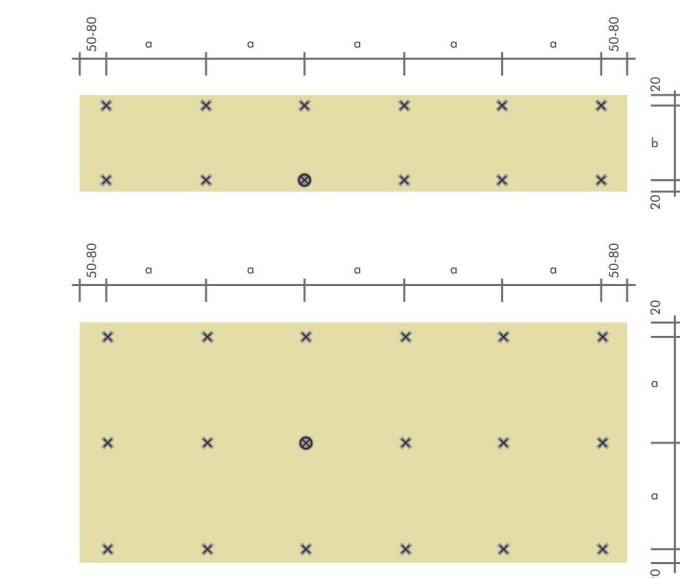
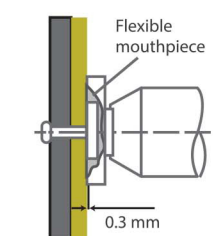
FASTENING SPACING

The rivets must be put in place with a flexible mouthpiece having clearance of 0.3 mm. The fastening is placed in such a way that the panel can move slightly. Rivets are put in place with flexible mouth-pieces. The defined clearance of the rivet head to the surface of the panel (0.3 mm) allows movement of the element in the drill hole as shown in figure. The centre point of the drill hole in the sub-construction must coincide with the centre point of the drill hole in the cladding panels. Drill with a centering piece. Screws must not be over-tightened.

The fastenings should be put in place starting from the middle of panel to outwards.

EDGE SPACING

To ensure the flatness and stability of the cladding panel, ensure that the edge spacing is maintained properly. The joints must be made at least 8 mm wide so that changes in size can take place without any obstruction.



mounting clips, one either side of the joint, are needed to provide the necessary hold. Please use proper backing strips to seal the vertical joint between cladding panels. If the siding elements are arranged so the vertical joints are offset then it is sufficient to install the panel plus backing strip using a single mounting clip. If the vertical joints are in a line then two mounting clips need to be used. There must be a gap of at least 8 mm between the panels at the joint.

4. Outside corners/inside corners with mitre

FASCIA Exterior lap siding panels can be mitred for both outside and inside corners. Outside corners: The top edge of the panel must be 12 mm shorter than the lower edge of the panel (regardless of the panel width). Inside corners: The lower edge of the panel must be 12 mm shorter than the top edge of the panel (regardless of the panel width).

The mitred edges must have a chamfer. The sub-structure needs to be protected with a plastic sheet to prevent water entering. Elements can be installed on both outside and inside corners using a variety of shapes of corner profile. In this case the panels are cut to size without a mitre. Please make sure there is a gap of at least 5 mm between each panel and the corner profile.

5. Installing the top row of panels

Secure the top row of panels by fitting screws along the top edge of each panel. Use screws with painted heads to match the colour of the panels, as used for the installation of full-sized FASCIA Exterior Cladding panels.

Method 3 - Reverts Free Panel Fixing

Stylam in co-operation with Dow Corning has designed a system for Elastic Bonding of ventilated facade panels for both interior and exterior applications.

After extensive research & testing, Dow Corning 896 PanelFix with a Tensile Strength > 1.1 Mpa, an elastic type one component neutral curing Silicone adhesive has been developed for bonding applications that require high durability and fast handling – provides instant bond strength after application and high strength adhesion once fully cured. Dow Corning after conducting detailed lab trials gas approved Stylam's Decorative Panels for achieving excellent adhesion compatibility with its 896 PanelFix.



INSTRUCTIONS FOR APPLICATION

1) CLEANING: Thoroughly clean all surfaces of loose debris. Wipe the joint surfaces and remove dirt and contaminants. Allow the surface to dry. Stylam recommends Dow Corning R40 Universal Cleaner or R41 Cleaner Plus.



2) PRIMER APPLICATION

Apply a thin, uniform layer of primer by hand to the Panel surfaces where the 896 PanelFix adhesive will be applied. Stylam recommends Dow Corning Primer P.



3) PANEL FIXING

A. Pre Fixing – Tape Application:

Once the cleaning and primer has been done and is dry, apply Dow Corning PanelFix Tape continuously & vertically on to the supporting structure.

DESIGNING RECOMMENDATION



Adhesive Fixing should meet the following requirements:

- There should be a maximum distance between the profiles of 400 mm to 500 mm. Apply 896 PanelFix to each profile.
- Stylam will take the assistance of Dow Corning while calculating 896 PanelFix adhesive bead. A typical joint configuration: 12 mm width x 3.2 mm thickness based on the following assumptions:
 - Max. allowable Panel size: 2000 mm x 1000 mm
 - Max. Permitted wind load: 2000 Pascal

For this type of design, the 896 PanelFix adhesive has the ability to withstand load of Panels up to 12mm thick and 2500Kg/m3 density – thereby providing long term durability and 200% safety.

Supporting Structure Requirements:

The supporting structures to which Dow Corning 896 PanelFix adhesive and Dow Corning PanelFix Tape will be adhered should be of a sufficient width.

Stylam will have the Technical Support from Dow Corning Team and in every Project this Adhesive System of Panel Fixing will be done, Stylam will get the Engineering & Technical support from Dow Corning.

Dow Corning PanelFix Tape, which is 12mm width, 3.2 mm thick in Black Color is recommended to be used for the temporary fixation of the Facade Panels during the 896 PanelFix Silicon Adhesive curing process. This will also ensure the minimum thickness of adhesive joint is achieved. Pre Fixing Tape provides instant tack and a temporary anchor that holds the Panel in position while the Silicon Adhesive 896 completely cures and reaches its final bond strength.

NOTE: Do not remove the upper protective layer from the tape until the Panels are ready for application.

B. 896 PanelFix Adhesive Application:

After tape installation, apply the adhesive on to the supporting structure and also directly to the Panel. Apply the adhesive in a continuous operation using a caulking gun, allowing a minimum of 5mm distance from the tape. Extrude the Silicone Adhesive with minimal angle between the nozzle and the surface to achieve the required joint dimensions.

**After the Silicon Adhesive application, remove the protective layer from the pre fixing tape.

C. Panel Installation:

Position the panel by gently pressing and correcting if necessary. Once in position, apply pressure to ensure that the Panel Fixing Tape is in complete contact with the inner faces of both the panel & supporting structure.

