



Aluminum Composite Panel



## Aluminum Composite Panel for Architecture



PIVOT DECORATIVE MATERIALS CO., LTD.



**Brief Introduction**  
Shanddong Yantai International Exposition Center

## **IBOND---The Professional Supplier of Aluminum Composite Panel Technology Applications in China**

In China, IBOND with 3M、PPG and other strategic partners supply the high-quality aluminum composite panels and professional design, installation integration services for the 2008 Beijing Olympics, Sinopec, ICBC, Zheshang Bank, the Singapore Subway System and other customers.

In the world, IBOND has established long-term and stable strategic cooperation with the European and American well-known architecture design groups, applies to the Public Facilities, Landmark buildings and so on.

IBOND has passed the test by the SGS and PSB professional testing institution, has been certified as Class 1.

### **Raw Material**

Basis aluminum: high-strength aluminum alloy  
Plastic Core: no-toxic low density polyethylene  
Surface coating :PVDF , manometer paint.

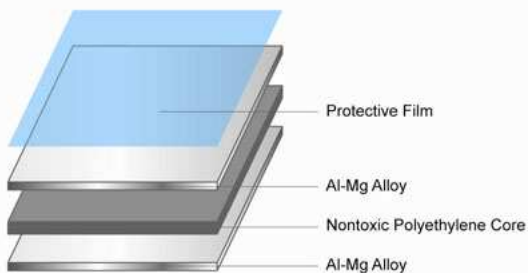
### **Specification**

Thickness: 3-6mm, recommend:4mm  
Width: 1000-1575mm, recommend: 1220mm, 1250mm, 1500mm  
Length: maximum 5800mm, recommend:2440mm, 3050mm, 4050mm



## Structure

Architecture Panel is composed of nontoxic low-density polyethylene core between two sheets of high strength aluminum alloy, with technology of continuous compositing. Because of its superior performance in rub-resist, acid-resist and alkali-resist, it is widely used as modern cladding buildings and interior designs.



## Architecture Panel Physical Parameter

Testing item	Standard	Result
Unit weight	ASTM D792	T4mm=5.5kg/m <sup>2</sup>
Thermal expansion	ASTM D696	24-28
Thermal deformation temperature	ASTM D648	115℃
Thermal conduction	ASTM 976	0.102kcal/m.hr℃
Flexural rigidity	ASTM C393	14.0*10 <sup>-5</sup>
Impact resistance	ASTM D732	1.640 kgf
Adhesive strength	ASTM D903	0.77kg/mm
Flexural Elasticity	ASTM D790	4032kg/mm <sup>2</sup>
Shear resistance	ASTM D732	2.7kgf/mm <sup>2</sup>
Fire propagation	ASTM E84	QUALIFIED
Wind-pressure resistance	ASTM E330	PASSED
Properties against water	ASTM E331	PASSED

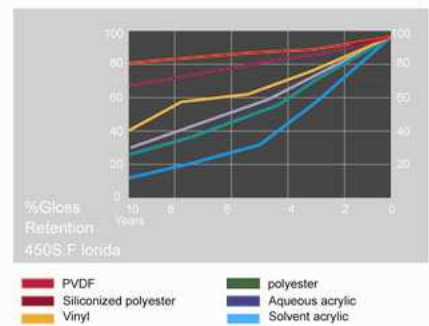
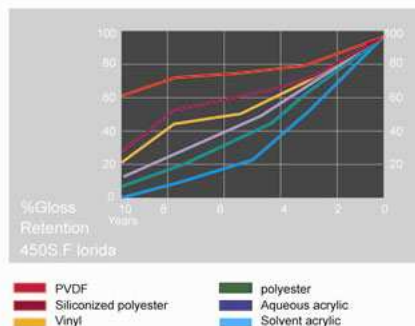
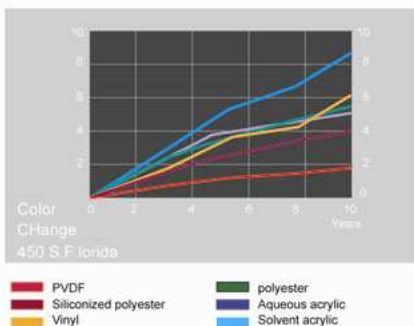
## Feature

- Weather-resistance:** Superior weather-resistance and ultraviolet(UV) resistance, acid-resistance and alkali-resistance, suitable for all natural environments. It can be guaranteed 15 years without change of color, its temperature range from -40 to 80; Quality

The fully automatic coil coating process is computer controlled throughout all the stages. Coating quality is tested according to the standards established by the ECCA . The long-term durability of coatings can be compared by measuring

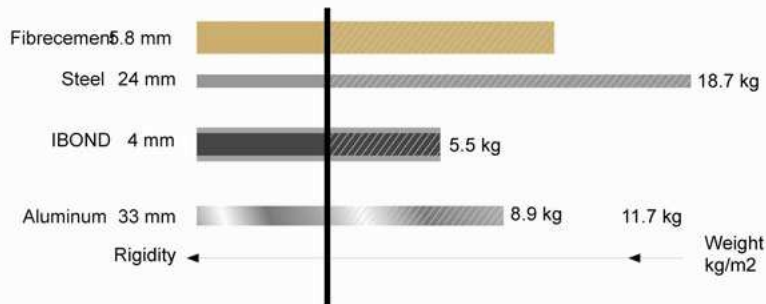
·Color change ·Gloss retention ·Chalking

The superiority of PIVOT Ultra-cote UV resistant lacquer systems (PVdF) is shown in the three graphs. The values indicated are taken from tests conducted by the American Coil Coating Association (NCCA) on lacquered surfaces which were exposed to the extreme climatic conditions of South Florida for several year





- 2 Economic: The ACP use high quality aluminum sheet and plastic core, it's light to transport, saving the project time.
- 3 Light weight: No pollution, is green building decorative material; Can be easily processed and installed; Light weight, good strength and flexibility;



IBOND compared with the solid aluminum panel					
Required thickness and actual weights of panels with same rigidity					
Rigidity E.J	Section Modulus W	Thickness	Weight	Aluminum Thickness	Weight
125 kn cm <sup>2</sup> /m	1.25 cm <sup>3</sup> /m	3 mm	4.5 kg/m <sup>2</sup>	2.7 mm	7.3 kg/m <sup>2</sup>
2400 kn cm <sup>2</sup> /m	1.75 cm <sup>3</sup> /m	4 mm	5.5 kg/m <sup>2</sup>	3.3 mm	8.9 kg/m <sup>2</sup>

- 4 Environment: Superior aging resistance, no coating change, no pollution, anti-acid, and anti-alkali, solvent resistance.
- 5 Color: We can provide 50 kinds of color for your choose. but any color and size are available according to your need.
- 6 Strength: The ACP use high quality aluminum, has greatly enhanced the strength of ACP, ensuring that the curtain wall wind pressure resistance, prevention of leakage, and the shock effect.
- 7 Surface smooth: The fire-resist ACP provide superior and smooth surface, satisfying the modern building on the pursuit of high-perception. The ACP's surface is much more smooth than aluminum sheet.





## Use Standard

- 1 Take care during loading and discharging, as well as transport, to avoid watering and scraping the aluminum surface.
- 2 The aluminum composite panel should be laid flat no matter during transport or storage. If side-laid, the panel should be vertical to the floor, panels should lean closely. The storage should be not more than 6 months.
- 3 Ibond could be sawing, cutting, slotting, bending, punching and painting.
- 4 Slotting should use the "V" shaped and sharp blade. The width of the groove bottom should be 2.5-4mm, the rotating speed is 2000-3000/min and the groove speed is 3-5m/min. To avoid the aluminum panel peel off as melting the adhesive while slotting, we should reserve 0.2-0.4mm polyester above the aluminum panel and reserve 20mm to the edge of the panels.
- 5 When we fold the Ibond, we should fold uniformly with once, do not fold repeatedly.
- 6 If raining, do not fill silica-gel.
- 7 When decorativng with globoidal panel, we should use the bending equipment, and the semidiameter of curvature is more than 20cm.
- 8 To avoid the color-difference, please install in accordance with the arrow in the direction of the installation.
- 9 Don't tear protective film off before completion of the work in case of any scratch and abrasion to the panel surface before the project is finished. We suggest to tear it within 45 days after the project is finished.
- 10 The panel will be not flat, if we use the resin or sclerous adhesive to install the indoor panel. It is better to use the splint or similar material for bottom board instead of direct adhere to the cement wall when installing.
- 11 The measure of the framework equipment is not more than 600mm\*600mm. The interior panel only used for the indoor decoration, not for the outdoor decoration.

## Test report



CE Certificatio



America ASTM Fire-resist  
Test Report



Switzerland SGS Test Report



ROSH Test Report



Singapore PSB Nanometer Test Report

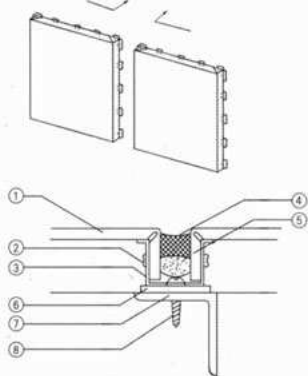


Coating Certificate



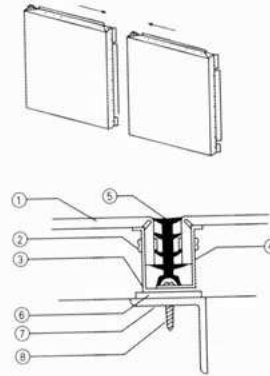
## Scheme of installation

Example of panel type and joint design



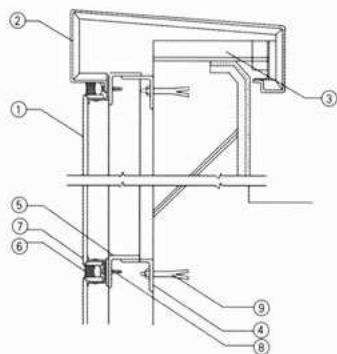
1. IBOND panel
2. Aluminum rivet
3. Angle aluminum
4. Sealing material
5. Back spacer
6. Spacer
7. Angle bar
8. Bullen screw

Example of panel type and joint design



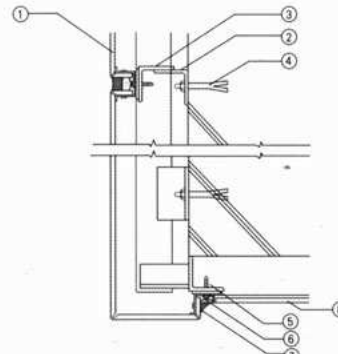
1. IBOND panel
2. Aluminum rivet
3. Angle aluminum
4. Angle aluminum
5. Gasket
6. Angle bar
7. Bullen screw

installation example of building top



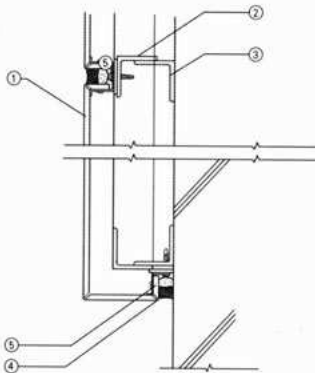
1. IBOND panel
2. Building top
3. Angle support
4. Angle bar
5. Sealing material
6. Lining material
7. Bullen screw
8. Built-in anchoring or expanding bolt
9. Lining material

installation example of eaves



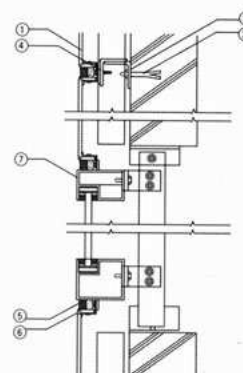
1. IBOND panel
2. Angle support
3. Angle bar
4. Built-in anchoring or expanding bolt
5. Sealing material
6. Lining material
7. Bullen screw
8. Ceiling
9. Lining material

installation example of foundation



1. IBOND panel
2. Angle bar
3. Angle support
4. Sealing material
5. Lining material

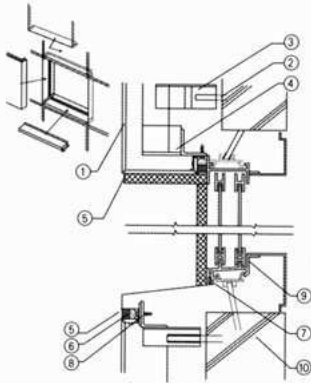
installation example of window frame



1. IBOND panel
2. Built-in anchoring or expanding bolt
3. Angle support
4. Angle bar
5. Sealing material
6. Lining material
7. External window frame

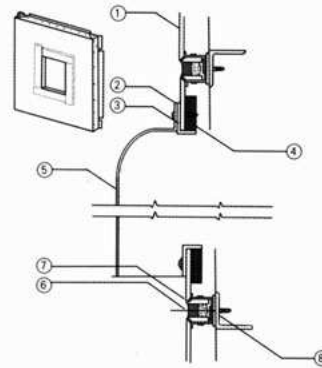


### installation example of repaired building window frame



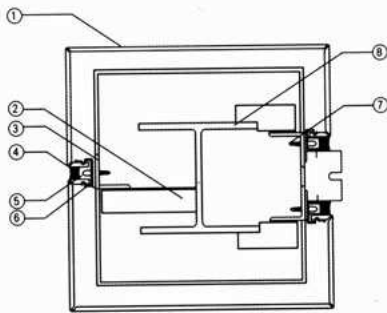
1. IBOND panel
2. Built-in anchoring or expanding bolt
3. Angle support
4. Angle bar
5. Sealing material
6. Lining material
7. Damper
8. Bullen screw
9. Window frame
10. The former bearing wall

### installation example of equipment and opening



1. IBOND panel
2. Seal around
3. Tape
4. Veneer
5. Weathertight covering material
6. Sealing material
7. Lining material
8. Bullen screw

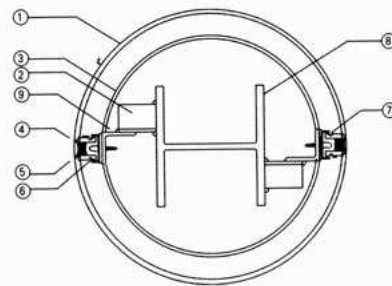
### Example of strut covering



1. IBOND panel
2. Angle support
3. Angle bar
4. Sealing material
5. Plastic lining bar
6. Accessories
7. Bullen screw
8. Bearing strut

Above mentioned accessories are used for low buildings

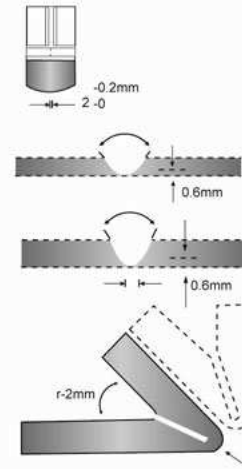
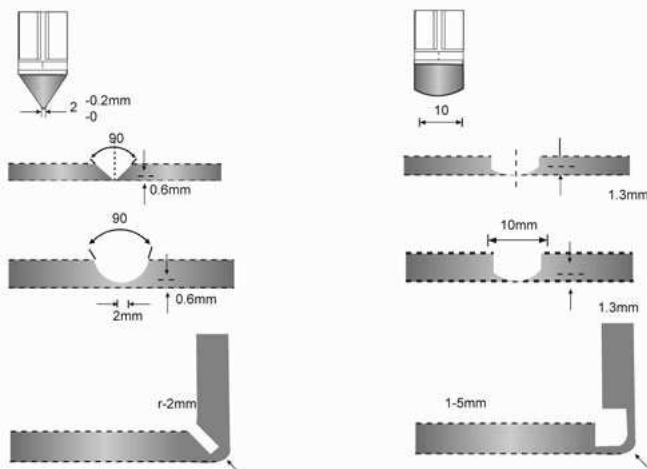
### Example of column covering



1. IBOND panel
2. Angle support
3. Steel plate strip
4. Sealing material
5. Plastic lining bar
6. Accessories
7. Bullen screw
8. Angle bar

Above mentioned accessories are used for low buildings

### Example of strut covering





## Example of Project

ACP becomes one of the best cladding materials in the world because of its advantage. It's widely used in buildings as follow:  
Office buildings, luxury residential, villas, hotels, shopping centers, entertainment venues, gas stations, auto 4S stores, chain stores, subway, the walls, and other decorative.

Curtain wall, internal and external wall, Ceiling, eaves, balcony, Galleries, exhibitions, partitions, Advertise fascia, Showing and display platform.

recondition of old buildings, the dust project cleaning



Olympic News Office Center



Qatar Golden Plaza



Jiangsu Education Office Building



Indonesia Plaza ABDA & Sudirman Mansion



Jiangsu Shuofang International Airport

## PIVOT DECORATIVE MATERIALS CO., LTD.

ADD: Pivot Industrial Park, Huashi, Jiangyin, Jiangsu, China

Post: 214421

Tel: 0086-510-86218220 Fax: 0086-510-86218185

E-mail: [info@pivotacp.com](mailto:info@pivotacp.com)

Web: [www.pivotacp.com](http://www.pivotacp.com) [www.ibond.cn](http://www.ibond.cn)

## Distributor

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