



WISDOM METAL COMPOSITES LTD

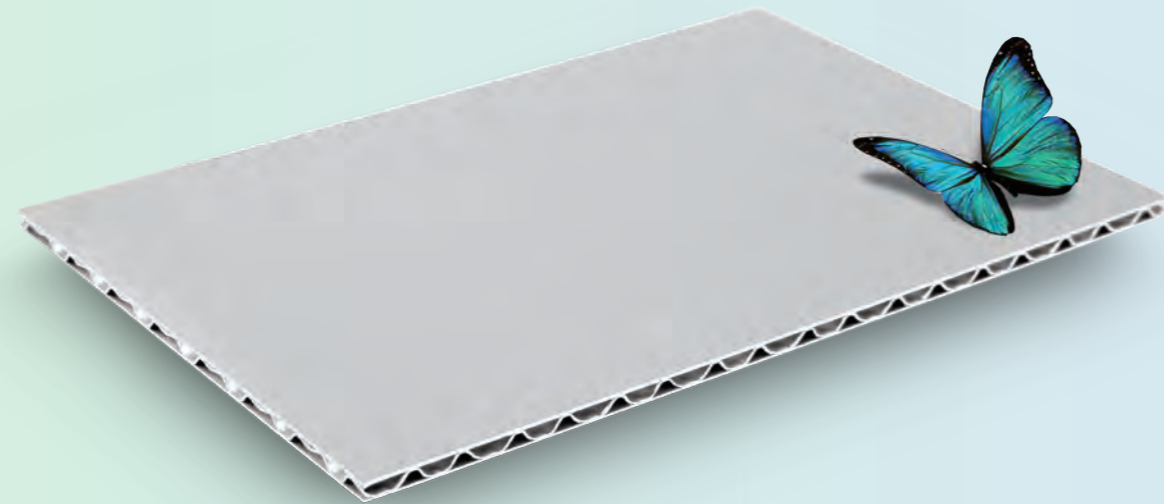
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ALUMINIUM LATTICE PANEL

Enlight Your Inspiration

A2

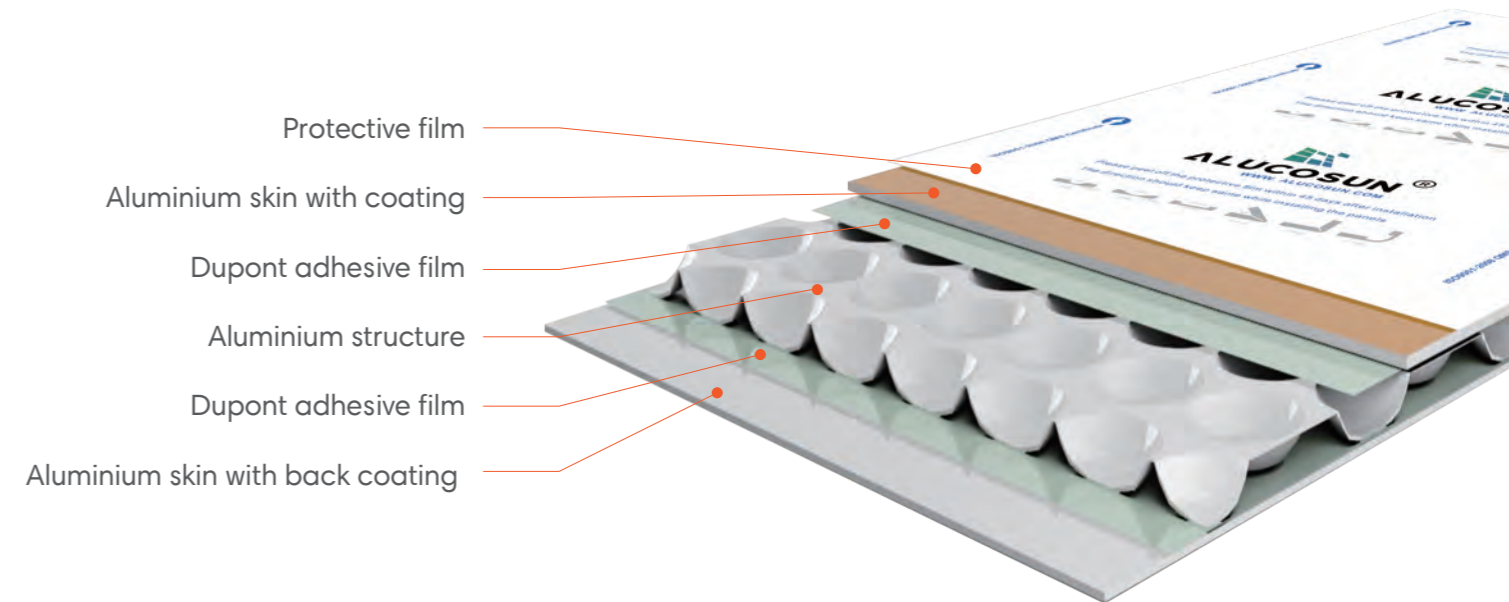


ALUMINIUM LATTICE PANEL

Alucosun introduces the new generation composite panels in innovated aluminium core instead of normal polyethylene or mineral-filled core. This new product named aluminium lattice panel is developed by Alucosun for strict requirements of fire retardancy regulations in architecture products.

Constructed by 100% aluminium structure, Alucosun aluminium lattice panel is combined with extraordinary fireproof performance, lightweight and ease of fabrication of composites makes Alucosun aluminium lattice panel an architects' dream.

Aluminium lattice panel is composed of non-combustible aluminium core and sandwiched between 0.7mm and 0.5mm thick aluminium (exterior grade of AA3003 or AA5005) for back surface.



DIMENSIONS

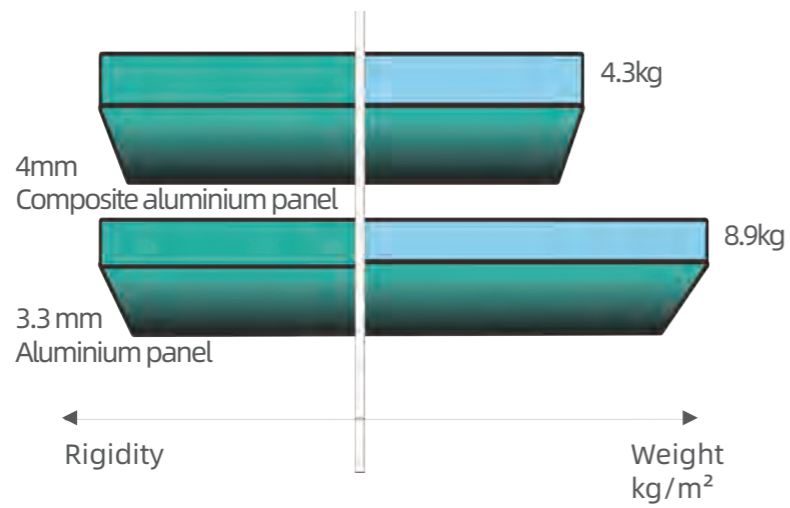
| Item | Specifications |
|--------------------------------|---|
| Panel thickness | 3mm, 4mm |
| Front aluminium skin thickness | 0.5mm, 0.6mm, 0.7mm |
| Width | 1000mm-1570mm |
| Length | 1000mm-6000mm |
| Alloy type | AA3003; AA5005 |
| Weight | 4mm: 4.3kg/m ² ; 3mm: 3.8kg/m ² |

TEST REPORT

| Test Item | Peel strength | Tensile Strength | Shear Strength by punch |
|-----------|-----------------|------------------|-------------------------|
| Method | GB/T 17748-2008 | ASTM D638-10 | ASTM D732-10 |
| Result | ≥7 N/mm | 69Mpa | 38Mpa |

| Fire Rating ASTM | | | | | | | | | | |
|------------------|-----------------|-------------------|----------------------|----------------------|------------------------|----------------------|----------------|-------------------|-------------------|---------|
| Test Item | | | | | | | | | | |
| Method | BS476-4 | BS EN 13501-1 | | | AS 1530.1 AS 1530.3 | | | | ASTM E84 | |
| Result | Non-combustible | Fire behavior- A2 | Smoke production- s1 | Flaming Droplets- d0 | Not deemed Combustible | Ignitability Index 0 | Heat Evolved 0 | Spread of Flame 0 | Smoke Developed 1 | Class A |

ADVANTAGES



1 LIGHT WEIGHT

With the innovation of core technology, Alucosun lattice panel has only 4.3kg/m² weight which is lighter than other materials with the same rigidity. It saves cost in transportation and labor.

3 FORMABILITY

Aluminium lattice panel aluminium core is convenient to be cut and grooved and less wearing on routers. Therefore, it saves your budget and time. It takes on many different shapes and its perfect formability does not affect its stability or flatness.

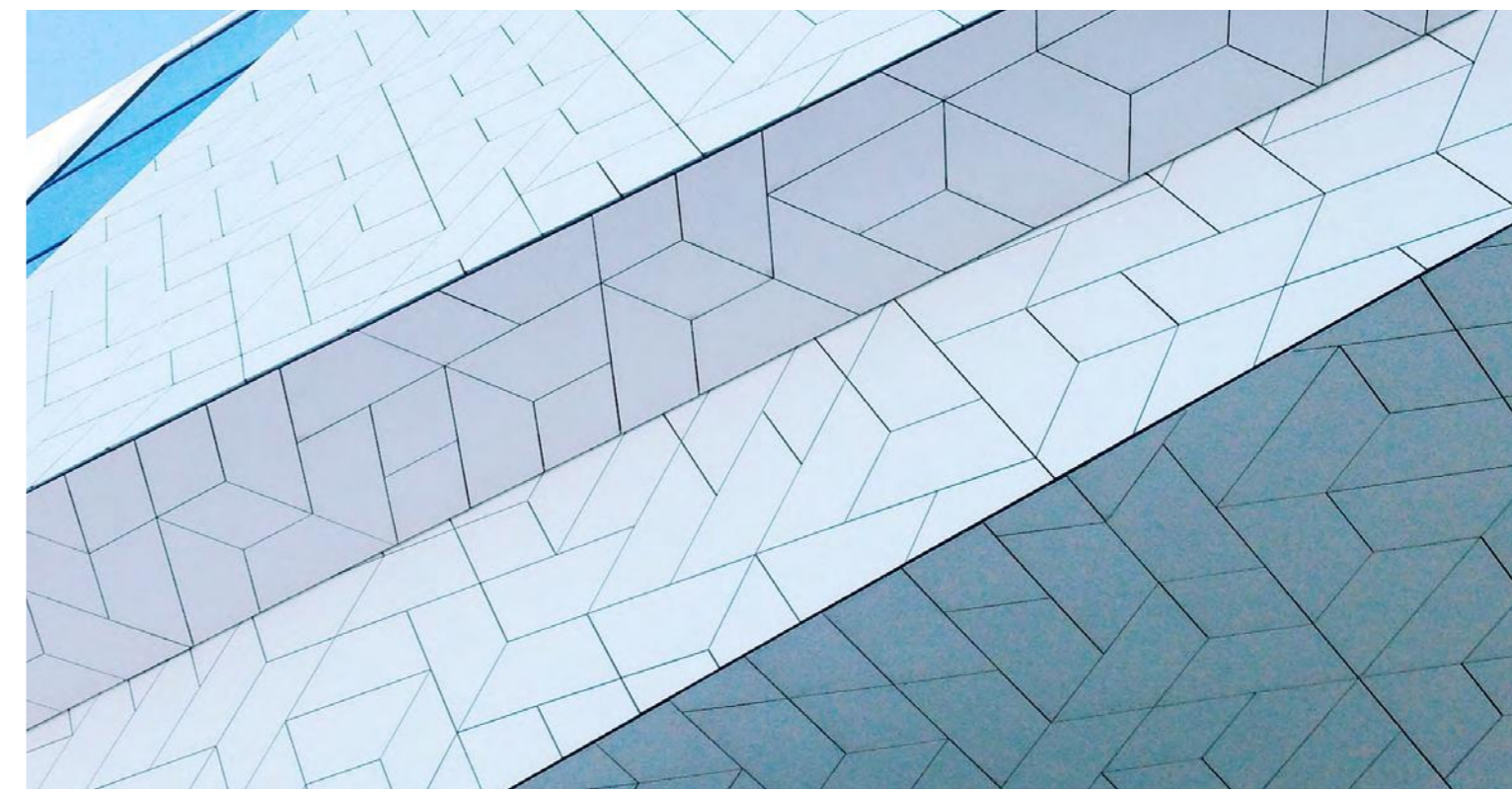


2 FIREPROOF PERFORMANCE

This structure assures the panel of non-combustibility and makes it more reliable and popular in all facade applications, especially in USA (NFPA285), UK (BS 476-4 standard) and Australia (AS1 530.1 standard) where there is a higher requirement and demand on fire retardancy.

4 ENVIRONMENT FRIENDLY

Being a member of our earth, we have the responsibility to protect our homeland. Our corrugated aluminium core of Alucosun A2 panel is 100% recyclable. Also there is no pollution during the production and application.



DATA

| PROPERTIES | TEST STANDARD | CONDITION or UNIT | RESULT |
|--------------------------------|------------------|-------------------------------------|---|
| Unit Weight | ASTM D 792 | Kg/m ² | 4.3 |
| Aluminium Front Thick | / | mm | 0.7 |
| Coating Thickness | EN ISO 2360-2003 | µm | 32 |
| Pencil Hardness | ASTM D3363 | HB min | 2H |
| Impact Resistance | ASTM D2794 | kg.cm | > 110 |
| Coating Flexibility | ASTM D4145 | T-bend (0-3T) | 2T |
| Coating Adhesion | ASTM D3359 | No adhesion loss | Passed |
| Color Retention | ASTM D2244 | Max Rating 5 Units after 4000 Hours | Passed |
| Gloss Retention | ASTM D523 | 80% after 4000 Hours | Passed |
| Chalk Resistance | ASTM D4214 | Max Rating 8 Units after 4000 Hours | Passed |
| Boiling Water Resistance | AAMA 2605 | 100° for 20mins | Less than 5% 4B |
| Muriatic Acid Resistance | AAMA 2605 | 10 drops of 10% HLC,15mins | No blistering |
| Alkali Resistance | ASTM 1308 | 10%,25% NaOH, 1 Hour | No change |
| Salt Spray Resistance | ASTM B117 | Upto 4000 Hours | No change |
| Low- High Temperature | / | -40 °C - 80 °C | No change |
| Peel Strength | ASTM D1781 | mm·N/mm | 140mm·N/mm(Front skin)、 125mm·N/mm(Rear skin) |
| Tensile Strength | ASTM E8 | Mpa | 5mm/min, 69MPa |
| Weighted Sound reduction index | ISO 717-1:2013 | db | 22(-1,-2) |

WARRANTY

The standard warranty is 15 -20 years depends on the location of exact projects. 30 years warranty is available for high-qualified surface finished products.



SURFACE TREATMENT

Various color and finish options make Alucosun Latest® a favorite choice of building envelope. Variety of spectra, durability of the paint systems, quality of the finish, etc., makes it suitable for any application of cladding, whether it is a commercial building, iconic structure with unique identity, or an established brand. Alucosun Latest® offers a variety of standard and custom finishes from its in-house coil coating facility. Alucosun Latest® is surface finished with PVDF and NANO paint systems in a continuous coil coating process, which ensures quality and consistency in compliance with AAMA 2605 specification.



PVDF paint system with composed 70% PVDF resin is known for high resistance to UV rays and environmental effects; therefore, Alucosun® is durable and consistent performance in extreme weather conditions.

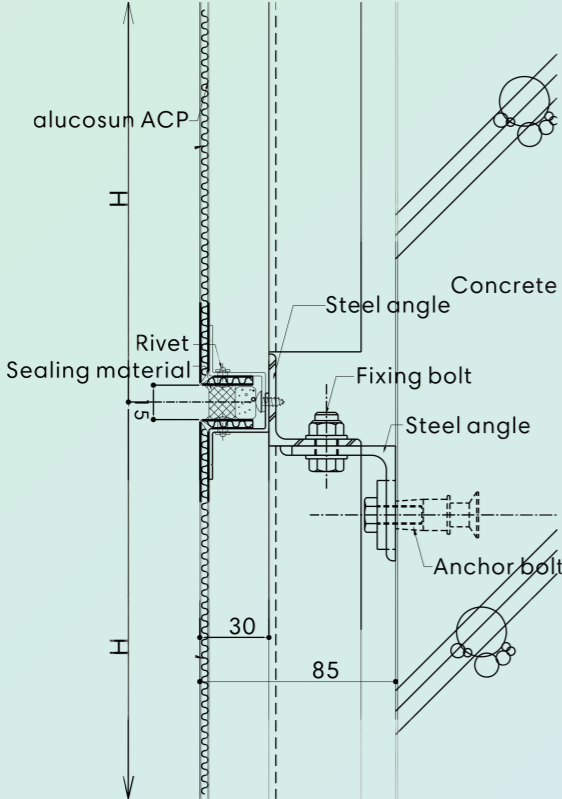
NANO-PVDF is a self-cleaning paint system. Such paint system provides an additional clear top coat with highly cross-linked NANO particles on a PVDF finish, which ensures a smooth surface. A smooth and clear surface makes dirt and dust difficult to stick on, which gives the building an always clean look. PVDF and NANO paint systems are highly durable, assuring 15-20 years of finish warranty.

ANODIZED panels with various finish options are available in Alucosun®, however, it is subject to certain time and size limitations. Naturally protected by an anodized layer, panels are highly durable, scratch resistant, and provide a warranty of about 30 years.

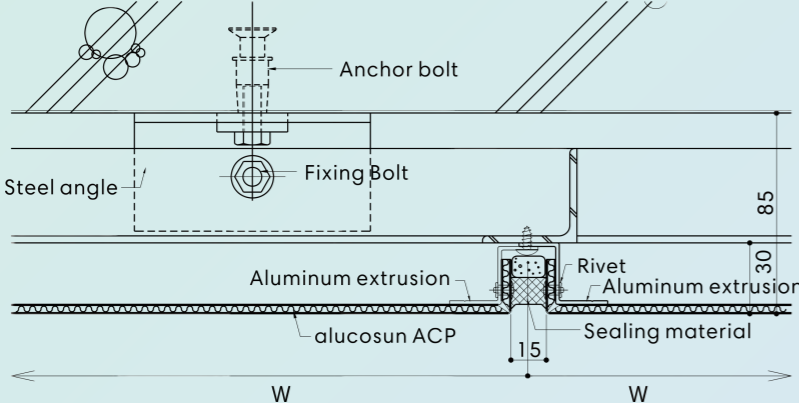
PE and HDPE paints are used widely in many applications thanks to the extensive ranges of colors and economy consideration. Now, the guarantee years can be extended from 5 years to 8 years with the different types of coating. HDPE finishes are also available as a custom paint system.



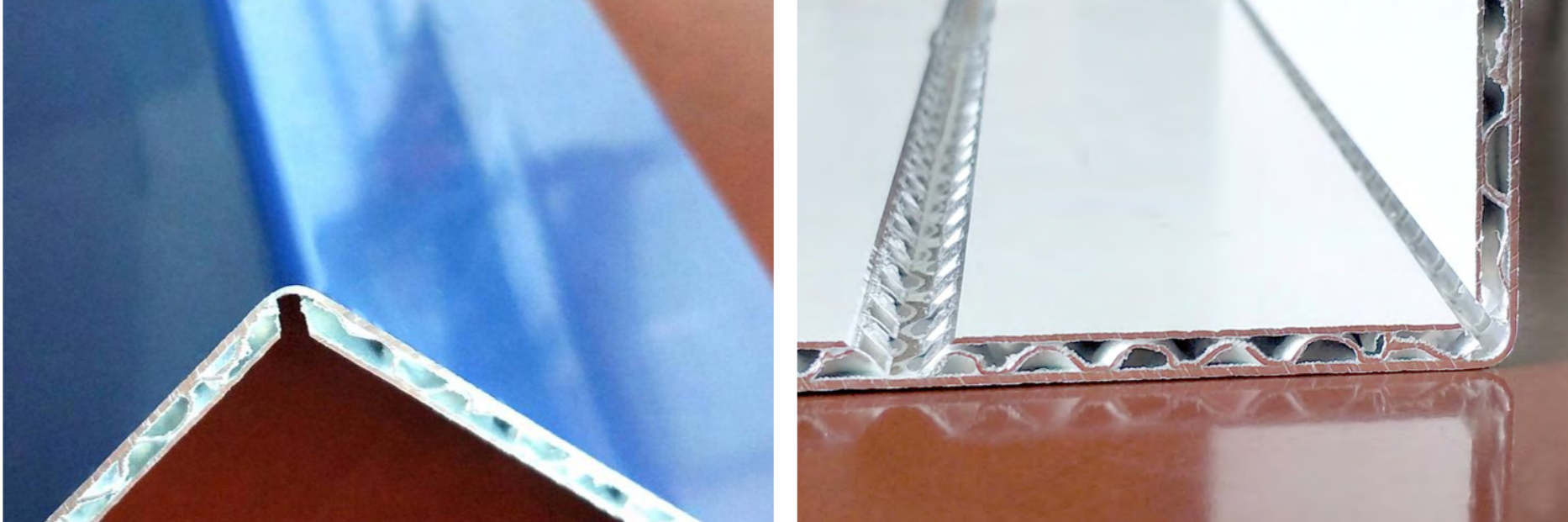
TYPICAL FIXING SYSTEM



VERTICAL SECTION



HORIZONTAL SECTION



FORMABILITY

When aluminium lattice panel is under edge fold construction, it shall be grooving at edge fold section and it may open V-groove and U-groove, etc. according to edge fold requirement, several typical grooving ways. It shall make use of special grooving machinery for aluminium panel to ensure grooving depth is not damage the opposite aluminium material and it shall be left with 0.8 mm thick. It may adopt reinforcing measures as bordered rib, etc. as it is required at grooving section.

| | | |
|---------------------------------|-----------------------------------|--|
| 90°V-groove for folds up to 90° | 135°V-groove for folds up to 135° | Rectangular(U-) groove for folds up to 150° depending on panel thickness |
|---------------------------------|-----------------------------------|--|

