



WISDOM METAL COMPOSITES LTD

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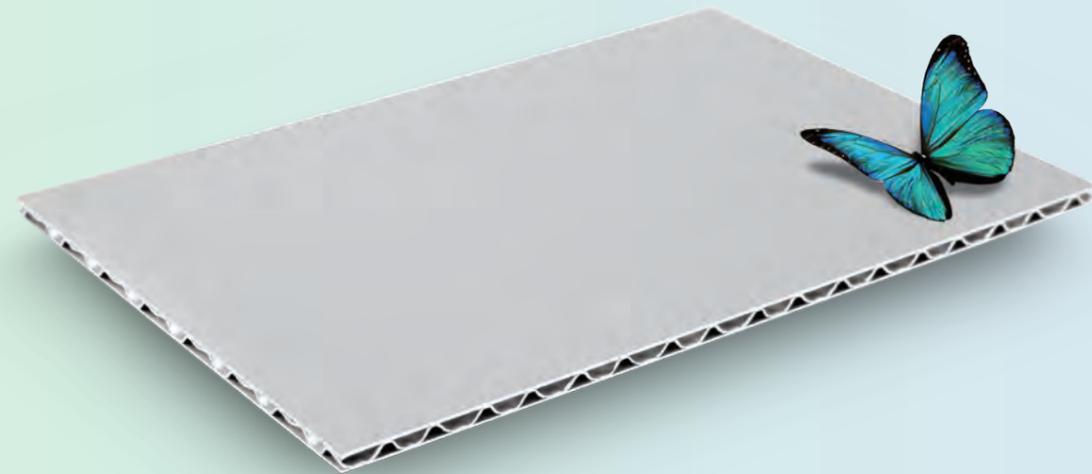
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ALUMINIUM LATTICE PANEL

Enlight Your Inspiration

A2

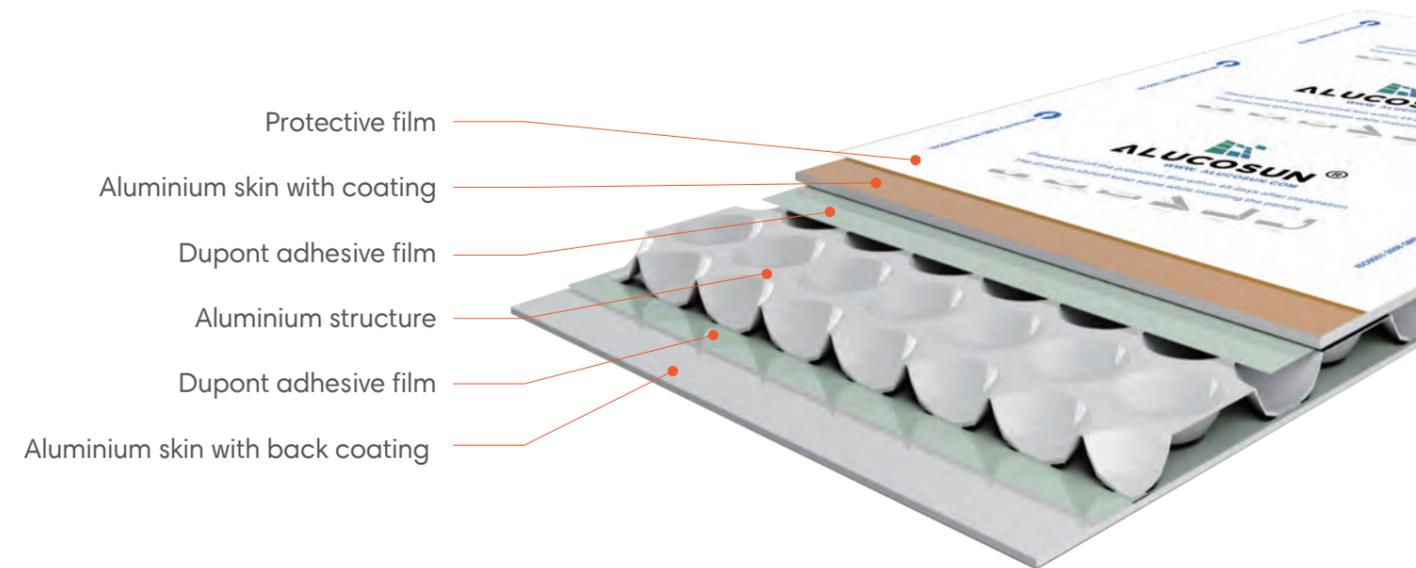


ALUMINIUM LATTICE PANEL

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

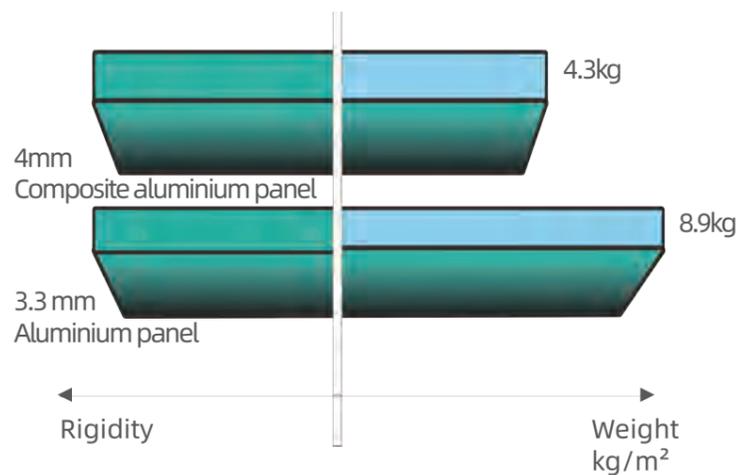
TEST REPORT

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	Fire Rating ASTM									
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.

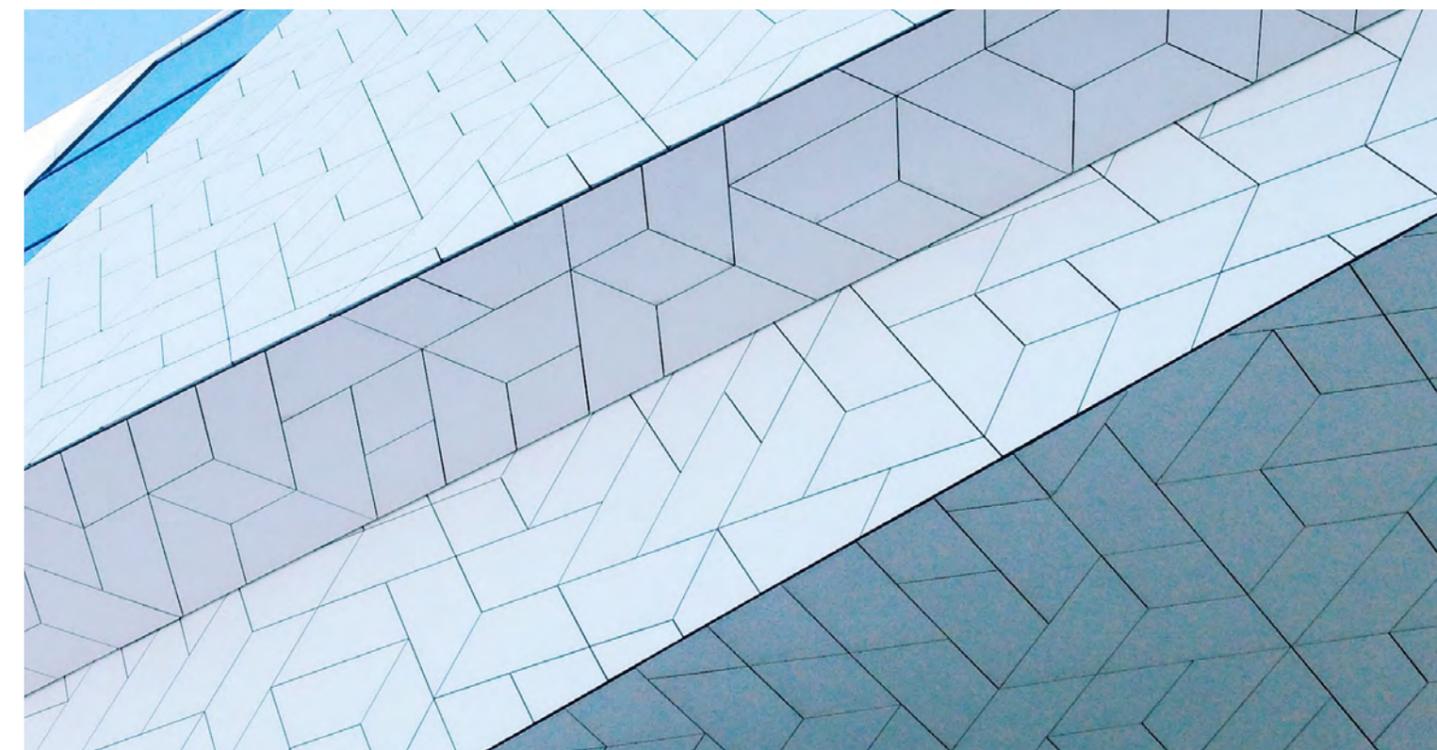
4 ENVIRONMENT FRIENDLY

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.



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.



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.

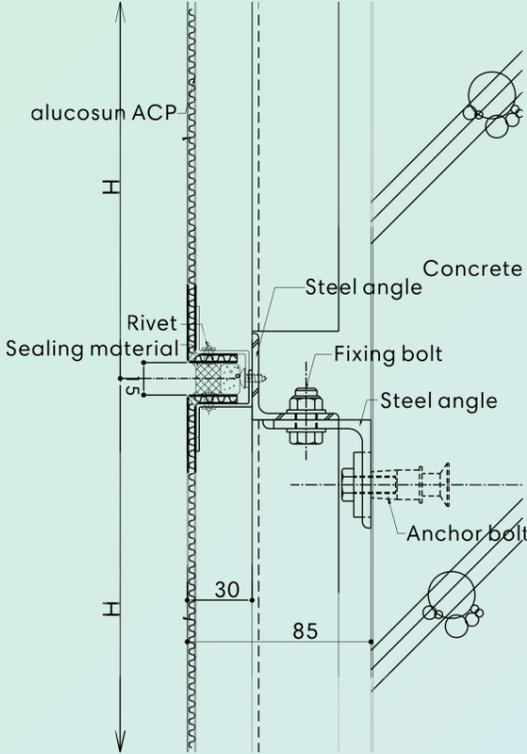
NANO-PVDF is a self-cleaning paint system. Such paint system provides an additional clear top coat with highly cross-linked NANO particles on a PVDF finish, which ensures a smooth surface. A smooth and clear surface makes dirt and dust difficult to stick on, which gives the building an always clean look.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

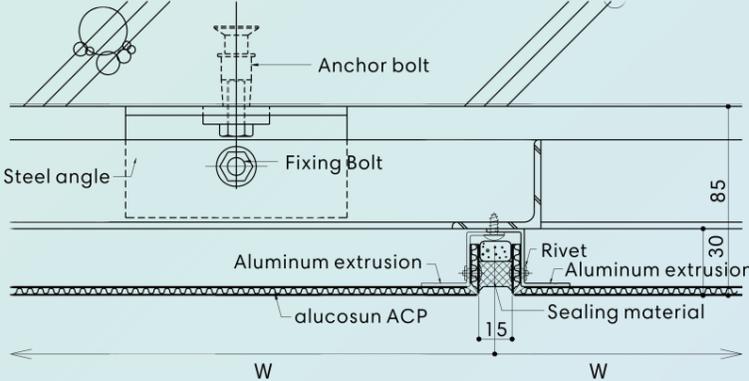
PE and HDPE paints are used widely in many applications thanks to the extensive ranges of colors and economy-consideration; now, the guarantee years can be extended from 5 years to 8 years with the different types of coating. HDPE finishes are also available as a custom paint system.



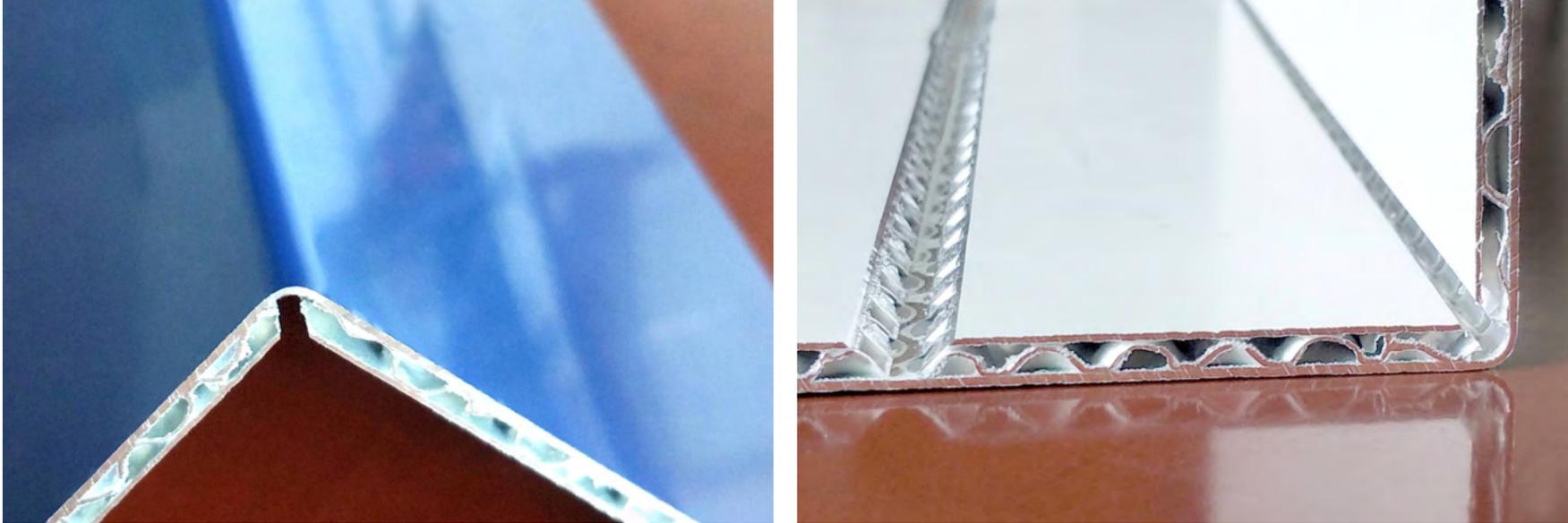
TYPICAL FIXING SYSTEM



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

