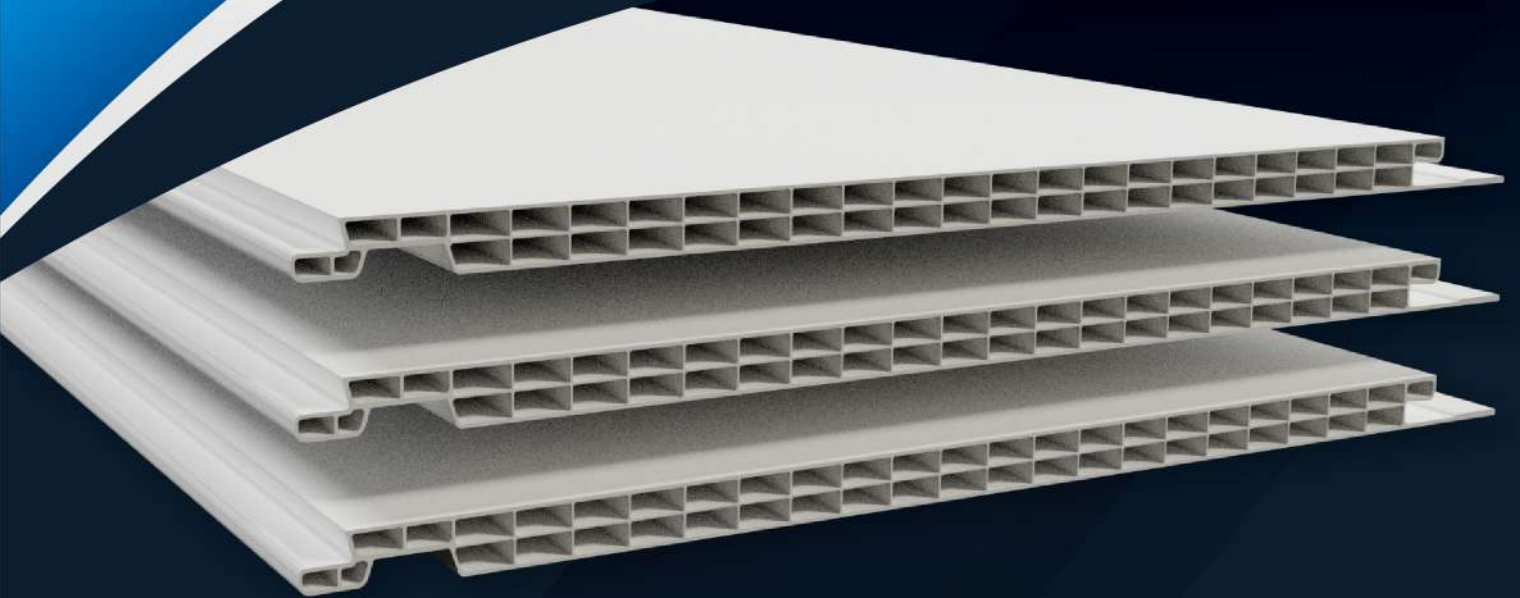


# Alderon®



FLAT WALL PANEL

INNOVATIVE BUILDING MATERIALS



**Alderon FLAT Wall Panel** is another innovative product from PT. Unipack Plasindo. It has excellent chemical resistance properties, good thermal insulating, waterproof, sturdy but lightweight comparatively, easy/quick to install for any projects and can be laminated with decorative films if needed. It has also good fire retarding properties being self extinguishing without external flame source. Alderon FWP is easy to install and clean, pest/termite deterring versus traditional insulating walls of stone glasswool constructions and of much better fire retardancy vs standard polyurethane PU foam sheets+metal sheets.

## Features

-  **Water Proof**
-  **Fire Rensitive**
-  **Anti-UV**
-  **Heat Penetration Control**
-  **Low Maintenance**
-  **Flexible and Strength**
-  **Easy to Clean**

## Product Specifications

Effective Width	500 mm
Weight	3.04 Kg/Lm
Flat Thickness	20 mm

### Some examples of Alderon FWP use :

- Industrial & Commercial building wall panels.
- Portable partitions panels for temporary rooms.
- Clean Food & Pharmaceutical factories panels.
- Emergency housing/building panels.
- Animal farms insulating & chemical resistant. (animal waste) wall claddings.



## Thermal Properties

	Test Method	Product
		Alderon FWP
Thermal Conductivity	ASTM E1530-11	0.27 W/mk
Thermal Resistance	ASTM E1530-11	7.13 E-2m <sup>2</sup> k/w
Service Temperature		-20 to 60 degree Celcius

Alderon FWP being of hollow and triple walled construction is of good thermal (and sound) insulating properties. Above are tasted sample data of insulating and conducting properties for comparison with other walls and panels.

The service temperature range of Alderon FWP is -20°C to 60°C, greater care should be taken when working with uPVC Sheet at lower temperatures; uPVC is less resistant to impact damage at temperatures below zero celcius.



## Physical & Mechanical Properties

	Test Method	Product
		Alderon FWP
Tensile Strength at Yield	ASTM D-638	30 Mpa
Elongation at Yield	ASTM D-638	15%
Hardness	ASTM D-2240	79
Modulus of Elasticity in Bending	ASTM D-790	750 Mpa

When installing Alderon FWP, horizontal supporting beams should be applied for every 1500 mm - 1800 mm of height and vertical beam for approximately 2000 mm span width.

Please take note that mechanical strength would reduce over time if exposed to sunlight and chemicals, and it is recommended after some years (depending on the location environment) that inspections be carried out re the structural integrity of the panels.





## Thermal Properties

Alderon FWP is self-extinguishing without external flame source and conforms with the highest ratings for plastic and composite materials. Under UL94 Flammability Test, Alderon FWP is classified as V-0 Low flammability.



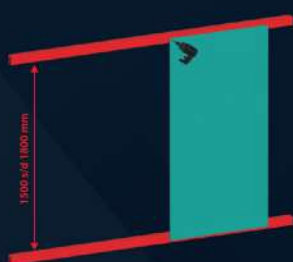
## Corrosion and Chemical Resistance

Alderon FWP has good chemical resistance to a wide range of chemicals, acids and bases, especially rubber processing chemicals, paper making chemicals, animal and waste farms methane & ammonia gas/vapour, fertilizer chemical, galvanizing fumes etc.

	Test Method	Product
		Alderon FWP
Sulphuric Acid 40% 60 degree Celcius 168 hours	ASTM D543-06	No Change
Nitric Acid 40% 60 degree Celcius 168 hours	ASTM D543-06	No Change
Ammonia Gas room temperature 168 hours	ASTM D543-06	No Change



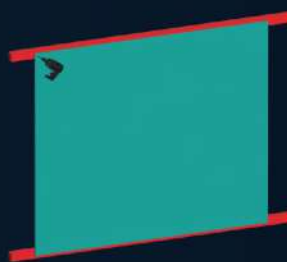
## Installation Process



Install the cladding module to the structure using roofing screws



Attach the second cladding module from male to female with the tongue & groove system



Repeat the step to install the next module

