

# TECHNICAL SHEET

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## U-Shield Panel



## Characteristics

### Application

Use as the exterior wall panel component with exterior insulation and a decorative finish in GAJCladding exterior wall system. The fully engineered rain screen system with a rear ventilation design removes excess moisture and heat.

### Description

GAJCladding U-Shield panel is made from high-density fiber cement boards, it has a large variety of textures and colors to meet customers' diverse design needs. U-Shield panel use rivet for anchoring. U-Shield panel has a highly effective protection layer that gives the panel long-lasting functional reliability.

# Product Specification

## Size

All measurements are in mm:

1220x2440x10;

1220x2440x12;

1220x2440x15;

Please refer to list of the product catalog.

Attention: GAJCladding U-Shield panels are delivered without drill anchors holes.

GAJCladding U-Shield panel size is subject to be cut on site to meet the technical requirements.

## Panel Physical Properties

Properties		Requirement	Value
Density		As Report	1.52g/cm <sup>3</sup>
Dimensional Measurements		Length: $\pm 1$ mm Width: $\pm 1$ mm Thickness: $\pm 0.5$ mm Edge Straightness: 1mm/m	Pass
Carrier Board Water Absorption		$\leq 28\%$	24.9%
Water Absorption after Coating		$\leq 3\%$	1.2%
Wet Rate		$\leq 0.25\%$	0.15%
Flexural Strength (Equilibrium Conditioning)		$\geq 18$ MPa	23.57MPa
Flexural Strength (Wet Conditioning)		$\geq 13$ MPa	16.5MPa
Water Tightness		Moisture marks are allowed on the bottom surface of the board after 24h inspection, but no water droplets should appear	Pass
Freeze/Water Resistance	Physical Observations	After 100 freeze-thaw cycles, there should be no cracking or delamination	Pass
	Flexural Strength Retention Rate	$\geq 80\%$	84.5%
Soak/Dry Performance		After 50 cycles of testing, the flexural strength retention rate $\geq 75\%$	97%
Heat/Rain Resistance		After 50 cycles of testing, No visible	Pass

	cracks, delamination or other defects should appear on the surface of the panel	
Warm Water Resistance	After 56 d of immersion in water at 60 °C, the flexural strength retention rate $\geq 80\%$	98%
Falling Ball Impact	5 impacts by ball drop test, no penetration cracks on the plate surface	Pass (10J)
Non-Combustibility	Class A	Pass
Combustion Characteristics Mass Loss	$\leq 50^\circ\text{C}$	16.33%
Combustion Characteristics Temperature Rise	$\leq 30^\circ\text{C}$	15 °C
Finish Surface Acid Resistance	48 hour	No Abnormity
Finish Surface Alkali Resistance	96 hour	No Abnormity
Finish Surface Salt Resistance	500 hour	No Abnormity
Finish Surface Accelerated Aging	1000 hour	No Abnormity

## 12mm Thick Panel Wind Load

Properties	Test Method	Value
Ultimate Pressure Load (Positive Pressure) *	ASTM E330	9166 Pa
Damage Wind Load (Negative Pressure) *	ASTM E330	10100 Pa
Drawing Force of Anchoring System	ASTM C1354	798 N
Shear Force of Anchoring System (Longitudinal)	ASTM C1354	1450 N
Shear Force of Anchoring System (Transverse)	ASTM C1354	2496 N

\* Maximum wind load due to environment constraints

## About On-site Sealing Treatment

The panel has been sealed in the factory. Once cutting or/and drilling holes on site, it is necessary to seal the cutting or/and drilling holes position.

Apply edge sealant simply run applicator along panel edges and holes. Ensure full coverage of edges and holes. Repeat this application if necessary.

## Substrate Requirements

Structural Substrate, such as concrete share wall, or metal framed share wall that is established with vapor barrier.

## Special Information

THE INFORMATION OR DATA IN THIS SHEET SERVES TO ENSURE THE PRODUCT'S INTENDED PURPOSE OR ITS SUITABILITY FOR USE AND IS BASED ON OUR FINDINGS AND EXPERIENCE. NEVERTHELESS, USERS ARE RESPONSIBLE FOR ESTABLISHING THE SUITABILITY OF THE PRODUCT FOR ITS INTENDED USE. APPLICATIONS OTHER THAN THOSE EXPLICITLY MENTIONED IN THIS TECHNICAL DATA SHEET ARE ONLY PERMISSIBLE AFTER PRIOR CONSULTATION WITH GAJCLADDING WHERE NO APPROVAL IS GIVEN, SUCH APPLICATIONS ARE AT THE RISK OF THE USER. THIS APPLIES IN PARTICULAR WHEN THE PRODUCT IS USED IN COMBINATION WITH OTHER PRODUCTS.