



**JBEAD**  
Aluminium Beaded Panel

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# JBEAD

## Aluminium Beaded Panel

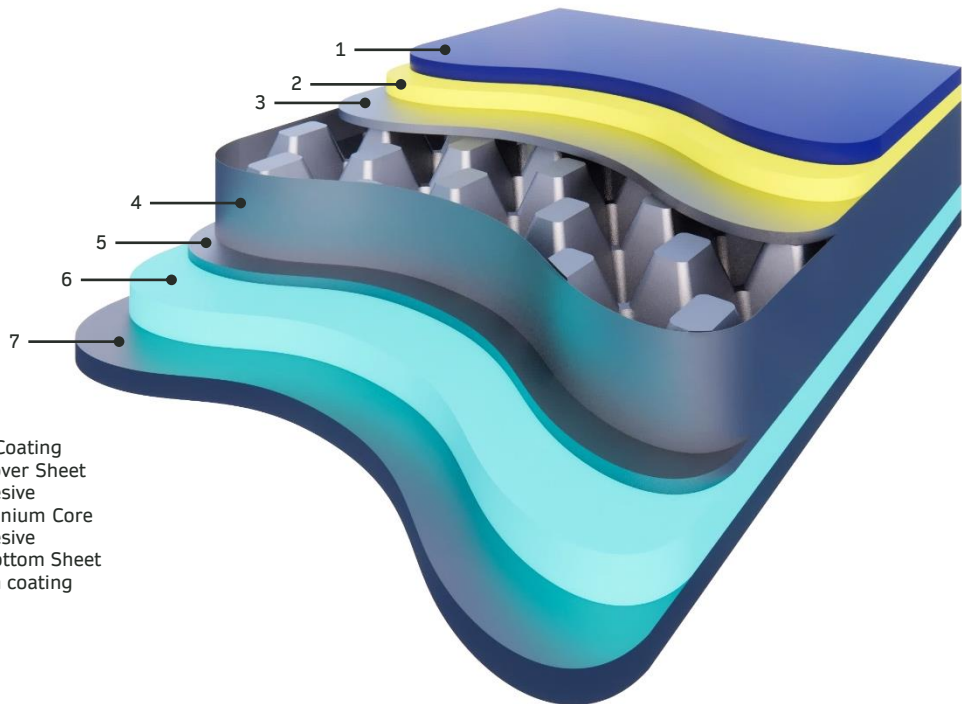
JBEAD is a sandwich aluminium composite panel which consists of two aluminium sheets and a modified aluminium beaded core layer. JBEAD is similar to traditional aluminium composite panel, but its core is constructed using an aluminium sheet and does not contain any polyethylene elements.

JBEAD comprises of seven layers which are all made of non-combustible materials. The overall thickness of the panel is 4mm, which is thinner and lighter compared to aluminium honeycomb panels. This makes JBEAD easier to install, especially for large surfaces.

Due to it being lighter in weight compared to other aluminium composite panels, JBEAD is an ideal facade material for all kinds of construction, from residential to huge industrial projects.

### KEY FEATURES

- Lightweight in nature, allowing ease of installation
- Similar installation as traditional aluminium composite panel, but does not contain combustible polyethylene elements
- Comes in various thickness of choice for different kinds of application
- Highly durable, weather resistant and non-corrosive



1. PVDF Colour Coating
2. Aluminium Cover Sheet
3. <0.1mm Adhesive
4. Beaded Aluminium Core
5. <0.1mm Adhesive
6. Aluminium Bottom Sheet
7. Anti-corrosion coating

## Composition & Size



**STRUCTURE:**  
t: Total Thickness  
a1: Thickness of Cover Sheet with PVDF coating  
a2: Thickness of Bottom Sheet with PE coating

Standard Composition & Size	
THICKNESS	
Total Thickness (t)	4mm
Aluminium Cover Sheet (a1)	0.5-0.7mm
Aluminium Bottom Sheet (a2)	0.5mm
Panel Weight (kg/m <sup>2</sup> )	4.4
DIMENSION	
Standard Width	1220mm or 1500mm
Maximum Length	Maximum length allowed for transportation
TOLERANCE	
Panel Thickness	± 0.2mm
Skin Thickness	± 0.03mm
Width / Length	± 2mm

Custom composition and sizes are available on request, please reach out to the JRP team.

## Fire Resistance

Fire protection has been the key technical requirement for facade panels in today's architecture. The use of non-combustible facade panels has now become a norm in the industry amongst architects and industry professionals.

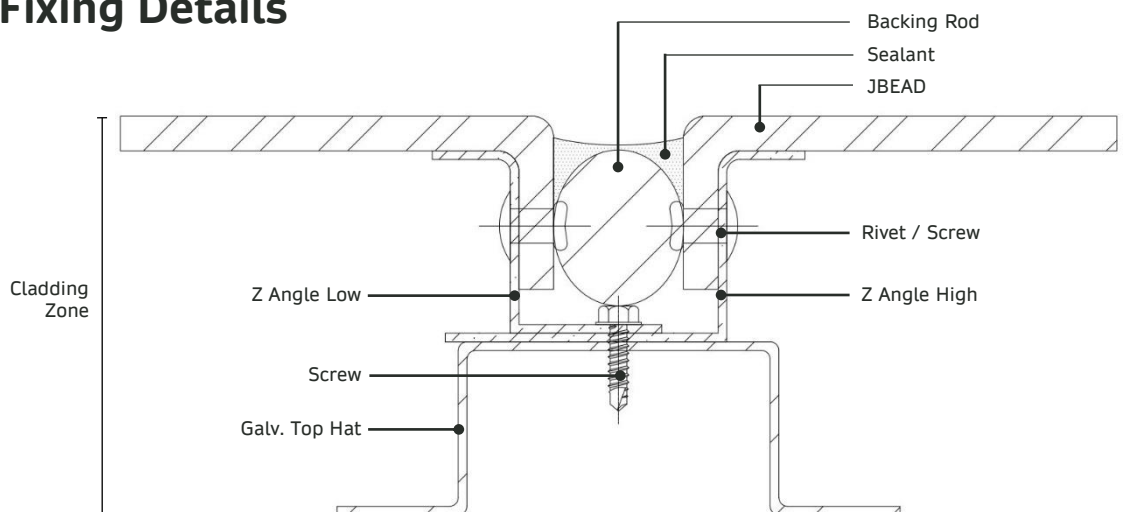
JBEAD is fully tested and is certified Class 0 under BS 476-6:1989/A1:2009 and BS476-7:1997. JBEAD is the choice of material where non-combustible cladding is required, such as hospitals, schools, factories, high-rise buildings.



## Technical Data

Specifications		
DESCRIPTION		
Aluminium Alloy	A3004 (Different Grades Available)	
Aluminium Tensile Strength (MPa)	≥ 185	
Modus of Elasticity (MPa)	70,000	
0.2% Proof Stress (MPa)	≥ 130	
Elongation (%)	≥ 3	
Linear Thermal Expansion	2.4mm/m at 100°C Temperature Difference	
FIRE PERFORMANCE		
Fire Propagation Test (BS 476 Part 6)	Class 'O' Rating	
Surface Spread of Flame (BS 476 Part 7)	Class 'O' Rating	
ADHESIVE FILM PERFORMANCE	ASTM Test Method	Specification
Density (g/cm³)	ASTM D-792	0.92
Melt Flow Rate (g/10min)	ASTM D-1238, 190°C/2.16kg	19.5
Elongation as Break (%)	ASTM D-638	450
Tensile Strength (MPa)	ASTM D-638	15.7
Melting Point (°C)	ASTM D-2117	125
Vicat Softening Point (°C)	ASTM D-1525	74

## Fixing Details



## Installation Guidelines

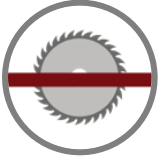
- All JBEAD panels should be installed in the same direction as marked on the protective film to prevent possible finish variation
- It is recommended to place total quantity required for a project in a single purchase order to ensure colour consistency as minor colour variation may occur between production lots
- Where aluminium materials come in contact with dissimilar metals, a proper insulator or caulking tape should be applied to insulate between dissimilar materials in order to avoid corrosive and electrolytic action
- The panel returns should not be caulked before protective film is removed

## Fabrication Considerations



### Roll Bending

JBEAD panels can be bent to suit the desired architectural facade design using a roll-bending machine. Polished rollers free of imperfections will be used. Minimum radius of 2,000mm.



### Cutting

JBEAD can be cut with identical tooling machine that is used to cut similar aluminium composite panels, such as CNC Router. For CNC Router, an up-spiral cutter is recommended to assist with swarf removal. There is no coolant required on the cutter or groover.



### Screwing

JBEAD can be screwed onto Z Angle or Top Hat with conventional stainless steel or class 3 self-drilling screws for metal. Avoid overtightening the screws and denting the face skin of the panel. Allow for thermal expansion for panels that are used outdoors.



### Riveting

Riveting is possible with the usual equipment and solid / blind rivets. Some localized pull-in of the face skin may occur. Allow for thermal expansion for panels that are used outdoors.



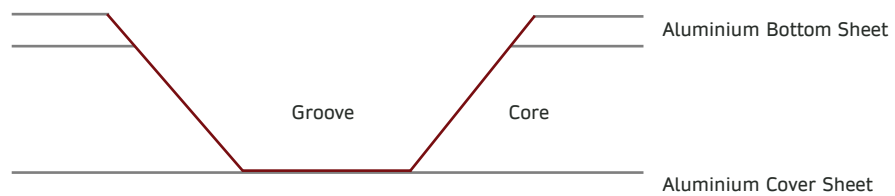
### Drilling

JBEAD panels can be drilled with centre point twist drill that is normally used for aluminium or steel.

## Grooving

Grooving JBEAD is a fairly simple process and is similar to grooving traditional aluminium composite panels or honeycomb panels. Using a CNC Router, JBEAD can be grooved to the perfect depth by brushing the rear of the aluminium face skin. The tooling is the same that is used for aluminium composite panels – a 90-degree V-groover with a 3mm flat.

The 0.7mm cover sheet used for JBEAD is what enables the groove depth to penetrate to the rear of the cover sheet, while still providing the required corner strength and gentle radius on the fold. If there are concerns that the groove has gone too deep and cut into the cover sheet of the panel, a possible solution is to glue an L angle down the rear of the fold, or in a cassette panel glue the zed angle to the rear of the panel.







# Together, Creates Future



## ABOUT JRP

JRP, comprising JRP & Associates Pte Ltd and JRP Supplies Pte Ltd (together “JRP”), is a leading regional specialist in metal roofing and aluminium composite panels. Since its establishment in 1999, JRP’s business has grown from strength to strength with projects spanning across Singapore and Asia.

JRP’s visionary statement “Together, Creates Future” refers to its goal to be a partner of progress. JRP earns the trust of its clients through a continuous effort to offer quality products and services, to become the region’s most respected and trusted roofing and cladding specialist in building safe and progressive communities.

JRP’s mission is to deliver quality output that far exceeds the expectations of its clients. This is satisfied through the high level of commitment that JRP gives to its clients – fostering trust among all parties affiliated with JRP, and upholding the integrity ascribed to the JRP’s image.

### Quality Solutions

JRP has a Quality Assurance System of policies and procedures to guide its workflow in a systemic manner. The main objectives of the Quality Assurance System are to ensure compliance with International Standard ISO 9001, ensure compliance with statutory and safety requirements and maintain a level of quality which maximizes customers’ satisfaction.

### Occupational Health & Safety Management

JRP & Associates Pte Ltd was awarded the BizSafe Star status by Singapore Workplace & Health Advisory Committee for delivering excellence in Workplace Safety & Health Management System. This is the result of the Company’s consistent efforts to display effective and excellent workplace safety and health practices, whether it is on or off-site.

BSI has also accredited the Company with OHSAS 18001 Occupational Health & Safety System Certificate, recognizing its efforts in effectively managing occupational health and safety.

### Doing Our Part for the Environment

JRP is committed to conducting its business in accordance with its own environmental policies and all applicable laws and regulations.

JRP strives to conserve natural resources through careful planning, efficient use of resources and minimizing waste through reduction and recycling. JRP commits to handle and dispose waste through safe and environmentally responsible methods and conduct regular environmental assessments to make necessary improvements.



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