

BEMO-BOND[®]

Metal Composite Panels



Product Data Sheet

BEMO-Bond Metal Composite Panels

Bemo USA Corporation, 1755 N 48th Street, Mesa, AZ 85205, USA



Usage Description: BEMO-Bond delivers a blend of rigidity, light weight, and durability in a metal composite panel that is both malleable and robust. Ideal for both indoor and outdoor wall cladding, BEMO-Bond infuses each project with an advanced, high-quality metal panel aesthetic. The panels are versatile, enabling limitless design possibilities during fabrication.

Panel Sizes: The panels are offered in thicknesses of 4mm and 6mm, with widths ranging from 1000mm to 2000mm, and lengths custom-fit to meet specific project requirements.

Material Composition: BEMO-Bond features a composite structure with two external metal layers, usually aluminum, encasing a core made of either low-density polyethylene or a fire-retardant material. A continuous thermal bonding process, utilizing cutting-edge adhesives and fire-resistant resins, ensures the metal skins are firmly adhered to the core, yielding a panel with exceptional bond integrity. This also creates a perfectly flat surface that minimizes the risk of oil canning.

Common Uses: BEMO-Bond surpasses other materials in creative scope, with its exceptional strength-to-weight ratio, flatness, and sleek lines, making it the go-to choice for external and internal wall cladding in commercial construction. Its lightweight and adaptable design is also suitable for retrofitting for column covers or intricate curves. It is easy to route, drill, punch, bend, or curve.

Finishes: An extensive palette of vivid colors and finishes is available with BEMO-Bond panels, with custom colors being a specialty. Whether you desire a specific color, stone or timber patterns, or Class I anodized finishes, BEMO-Bond can accommodate. The panels also come in natural material options such as copper, zinc, stainless steel, and brushed aluminum.

Maintenance: Requiring little to no upkeep when installed by a skilled contractor, BEMO-Bond panels may only need occasional pressure washing, depending on the finish and the environmental exposure of the building.



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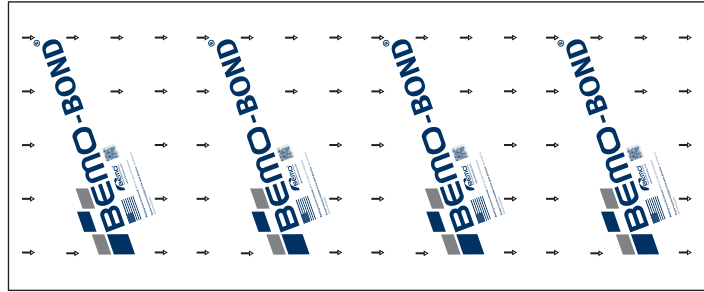
visit www.bemousa.com. For more information call or email at techservices@bemousa.com.

Panel Dimensional Tolerances

Thickness: $\pm 0.2\text{mm}$

Width: 1000~2000mm ($\pm 2\text{mm}$)

Length: 3001~6000mm ($\pm 3\text{mm}$)



Before cutting and routing, it's important to consider the thermal length expansion of BEMO-Bond to maintain the precise dimensions of the components upon assembly. It is advised that the panels be acclimatized at room temperature for at least 24 hours prior to processing.

Panel Dimensions

Panel Thickness(mm)	2	3	4	5
Aluminum Skin Thickness(mm)			0.2	
Weight(Kg/m ²)LDPE Core	3.0	4.3	5.5	7.8
Weight(Kg/m ²)B1FR Core	3.5	4.9	6.3	9.1
Aluminum Skin Thickness(mm)			0.3	
Weight(Kg/m ²)LDPE Core	2.9	4.6	5.7	8.1
Weight(Kg/m ²)B1FR Core	3.7	5.3	6.5	9.3

Dimensional Tolerances

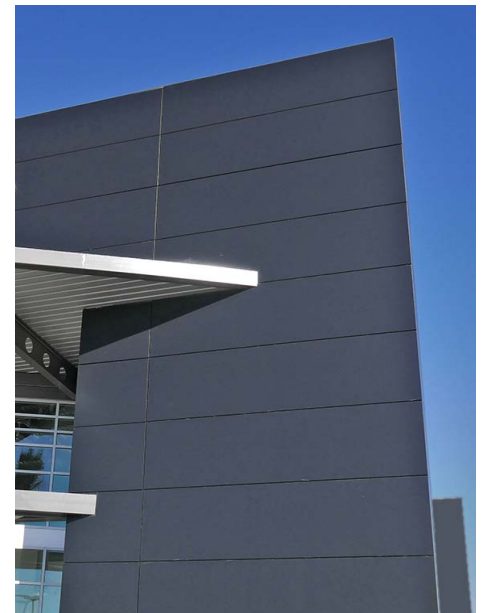
Thickness(mm)	± 0.2	
Width(mm)	± 2	
Length(mm)	± 3	
Diagonal(mm)	± 5	
Warp	3.2(Put the panel on the glass platform)	
Thermal Expansion	2.4mm/m(100° Temp Difference)	
Colors Difference	White	$\Delta E \leq 0.5$
	Metallic	$\Delta E \leq 1.0$
	Colors	$\Delta E \leq 1.5$

Product Properties

Aluminum Alloy	1100/3003/5005/5052
Surface Hardness	45
Extension and Manufacturing Characteristics,%	7
Bending Strength(MPa)	133-59
Shearing Strength(MPa)	27.75

Surface Properties

Coating Thickness(Micron)	From 16um to 60um based on different paint system
Pencil Hardness	2H
Lacquering	Polyester,Rivets, bolts/nuts, and tapping screws are commonly employed to connect BEMO-Bond panels with aluminum extrusions. Aluminum blind rivets are recommended for their ability to be installed from one side. For bolts/nuts and tapping screws, materials such as aluminum or stainless steel are suitable choices.,FEVE,PVDF,NANO PVDF
Temperature Resistance	-50...+80
Gloss(initial value)	30%-90%
Boiling Water Resistance	Boiling for 2hrs without change
Acid Resistance	Surface immersed in 2% HC1 for 24hrs without change
Alkia Resistance	Surface immersed in 2% NaHO for 24hrs without
Oil Resistance	Surface immersed in 20# engine Oil for 24hrs without change
Solvent Resistance	Cleaned 100 times with Dimethyl benzene without change



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