



ALUCOBOND PLUS

Alucobond[®] PLUS has been developed exclusively for the higher requirements of the fire regulations in architecture. Due to its fire resistant core (FR Core), Alucobond[®] PLUS meets the higher requirements of fire classifications while offering the proven product properties of the Alucobond[®] family, such as flatness, formability, resistance to wear and simple processing. The superb properties of this material boost one's inspiration and offer architecture a wide range of solutions while meeting fire performance requirements of today's building standards. Alucobond[®] PLUS is available in most of our current finishes and most custom colors.

PRODUCT DESCRIPTION

Material Composition

- › Aluminum interior and exterior facings in 0.020" nominal thickness to ensure flatness
- › Proprietary fire-resistant core available in 4mm nominal thickness only

Sheet Widths

- › Standard coil coated widths include 50" and 62"
- › Standard anodized widths include 62"
- › Custom width 40"

Sheet Lengths

- › Standard lengths include 146" and 196"
- › Custom lengths for coil coating up to a maximum of 360"
- › Custom lengths for anodized up to a maximum of 216"

Minimum Bending Radius

- › The minimum bending radius of Alucobond Plus without routing the interior skin is 15 times the thickness of the material

FIRE TESTING

Wall Assembly Fire Performance Tests

- › NFPA 285: Passed
- › CAN/ULC-S134: Passed

TECHNICAL SUMMARY

Temperature Resistance

- › Withstands environmental temperature changes from -55°F to +175°F
- › Coefficient of linear expansion is governed by the aluminum sheet

Technical Properties

- › Nominal Thickness: **4mm**
- › Nominal Weight: 1.56 lb/ft²
- › Moment of Inertia: .000212 in⁴/in
- › Section Modulus: .00275 in³/in
- › Rigidity: 2143 lb-in²/in

Sustainability Design

- › LEED 3
- › LEED v4
 - LCA Industry Standard
 - EPD Industry Standard



Accepted Code Evaluation Reports

- › 1. ICC-ES
- › 2. Florida Product Approval
- › 3. City of Los Angeles

MANUFACTURING

Manufacturing Location

- › Alucobond PLUS is currently manufactured in Benton, Kentucky USA

To download PDF or AutoCAD details and specifications, visit our website at www.alucobondusa.com.

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ENGINEERING PROPERTIES FOR ALUCOBOND[®] PLUS MATERIAL

Standard Test Method*	Description	Category	4mm
ASTM D-635	Rate of Burning	Fire Performance Properties	CLASSIFIED CC1
ASTM D-1929	Ignition Temperature-Self	Fire Performance Properties	783°F
ASTM D-1929	Ignition Temperature-Flash	Fire Performance Properties	784°F
ASTM E-84	Surface Burning Characteristics (Flame Spread Index)	Fire Performance Properties	10
ASTM E-84	Surface Burning Characteristics (Smoke Development Index)	Fire Performance Properties	5
CAN/ULC-S102	Surface Burning Characteristics (Smoke Development Index)	Fire Performance Properties	30
CAN/ULC-S102	Surface Burning Characteristics (Flame Spread Index)	Fire Performance Properties	0
ASTM C-365	Flatwise Compression Strength	Mechanical Properties	7050 psi
ASTM D-790	Flexural Modulus (Perpendicular)	Mechanical Properties	663 ksi
ASTM D-790	Ultimate Flexural (Perpendicular)	Mechanical Properties	3400 psi
ASTM D-790	Flexural Modulus (Parallel)	Mechanical Properties	653 ksi
ASTM D-790	Ultimate Flexural (Parallel)	Mechanical Properties	3600 psi
ASTM D-638	Modulus of Elasticity (Perpendicular)	Mechanical Properties	2690 ksi
ASTM D-638	Tensile Strength (Perpendicular)	Mechanical Properties	6230 psi
ASTM D-638	Tensile Yield (Perpendicular)	Mechanical Properties	5040 psi
ASTM D-638	Elongation (Perpendicular)	Mechanical Properties	12.6%
ASTM D-638	Modulus of Elasticity (Parallel)	Mechanical Properties	2380 ksi
ASTM D-638	Tensile Strength (Parallel)	Mechanical Properties	6480 psi
ASTM D-638	Tensile Yield (Parallel)	Mechanical Properties	5000 psi
ASTM D-638	Elongation (Parallel)	Mechanical Properties	13.2%
ASTM C-518	Thermal Conductivity	Thermal Properties	U = 6.5 Btu/hr ft ² °F
ASTM C-518	Thermal Resistance	Thermal Properties	R=0.16
ASTM C-518	Thermal Conductance	Thermal Properties	6.25
ASTM D-648	Deflection Temperature - Perpendicular	Thermal Properties	185°C
ASTM D-648	Deflection Temperature - Parallel	Thermal Properties	189°C
ASTM C-273	Shear Test in Flatwise Plane	Bond Integrity Properties	2180 psi
ASTM C-297	Tensile Bond Strength Test in Flatwise Plane	Bond Integrity Properties	1160 psi
ASTM D-1781	Bond Integrity	Bond Integrity Properties	123 N mm/mm
ASTM E-90	Sound Transmission (STC)	Acoustical Properties	30
ASTM E-90	Sound Transmission (OITC)	Acoustical Properties	24
ASTM C-272	Water Absorption	Physical Properties	0.003%
ASTM D-696	Coefficient of Linear Thermal Expansion	Physical Properties	1.11x10 ⁻⁵ mm/mm °C

*The ASTM (American Society for Testing and Materials) Standard Test Method defines the way a test is performed and the precision of the result. The result of the test is then used to assess compliance with a Standard Specification.

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