



As the original “aluminum composite material,” ALUCOBOND® PLUS has been developed exclusively to allow architects and designers to meet the fire performance requirements of today’s building standards while using ACM as the material of choice. Consisting of two sheets of smooth .020” aluminum thermo-bonded to a solid, fire retardant core, ALUCOBOND PLUS is one component of the assembly that meets the requirements of fire classifications while offering the proven product properties such as flatness, form-ability, durability and ease of fabrication.

The versatile characteristics of ALUCOBOND PLUS provide for a plethora of applications such as exterior and interior cladding, column covers, canopies, soffits and even signage, allowing architects to offer inspiring, creative, and innovative designs while meeting the standards of sustainable planning.

ALUCOBOND PLUS is available in all of our current finishes and custom colors.

PRODUCT DESCRIPTION

MATERIAL COMPOSITION

- Aluminum interior and exterior facings in 0.020” nominal thickness
- 4mm total nominal thickness, including proprietary fire retardant core

SHEET WIDTHS

- Standard coil-coated width of 62”*
- * Some finishes are stocked in 40”, 49.2” or 50”. Please refer to stock material list
- Custom widths of 40” and 50” available on request

SHEET LENGTHS

- Standard coil-coated length of 196”
- Reflect Mirror is offered in 146”
- Custom lengths for coil coating: maximum 400”
- Custom lengths for anodized: maximum 216”

MINIMUM BENDING RADIUS

- The minimum bending radius of ALUCOBOND PLUS without routing the interior skin is 15 times the thickness
- $4\text{mm} \times 15 = 60\text{mm}$ (2.36”)

MANUFACTURING

- ALUCOBOND PLUS is made in Benton, Kentucky USA

TECHNICAL SUMMARY

TEMPERATURE RESISTANCE

- Withstands environmental temperature changes from -55°F to +180°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 of modulus: .00275 in³/in
- Rigidity: 2143 lb-in²/in

SUSTAINABILITY DESIGN

- LEED 3
- LEED v4/4.1
 - LCA Industry Standard
 - EPD Industry Standard

ACCEPTED EVALUATION REPORTS

- ICC-ES: 1185
- Florida Product Approval: FL29842
- Miami Dade County NOA: 15-0923.03
- Los Angeles Research Report: 24868
- Underwriters Laboratory: 19980

WALL ASSEMBLY FIRE TESTING

- CAN/ULC S134**
- NFPA 285**

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

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Standard Test Method*	Description	Category	4mm
ASTM C-365	Flatwise Compression Strength (Ultimate)	Mechanical	9291 psi
ASTM C-393	Core Shear Properties (Perpendicular) Ultimate Facing Bending Stress	Mechanical	24,720 psi
ASTM C-393	Core Shear Properties (Parallel) Ultimate Facing Bending Stress	Mechanical	22,732 psi
ASTM D-790	Flexural Modulus (Perpendicular)	Mechanical	1891 ksi
ASTM D-790	Ultimate Flexural (Perpendicular)	Mechanical	18,573 psi
ASTM D-790	Flexural Modulus (Parallel)	Mechanical	1815 ksi
ASTM D-790	Ultimate Flexural (Parallel)	Mechanical	17,703 psi
ASTM D-790	Yield Flexural Stress (Perpendicular)	Mechanical	6667 psi
ASTM D-790	Yield Flexural Stress (Parallel)	Mechanical	6930 psi
ASTM D-638	Modulus of Elasticity (Perpendicular)	Mechanical	2930 ksi
ASTM D-638	Tensile Strength (Perpendicular)	Mechanical	7750 psi
ASTM D-638	Tensile Yield at 0.2% Offset (Perpendicular)	Mechanical	6570 psi
ASTM D-638	Elongation (Perpendicular)	Mechanical	14.2%
ASTM D-732	Punching Shear (Maximum Shear Load)	Mechanical	2198 lbs.
ASTM D-732	Punching Shear (Shear Strength)	Mechanical	4615 psi
ASTM C-518	Thermal Conductivity	Thermal	U=6.5 Btu/hr ft ² °F
ASTM C-518	Thermal Resistance	Thermal	R=0.16
ASTM C-518	Thermal Conductance	Thermal	6.25
ASTM D-648	Deflection Temperature - Perpendicular	Thermal	185°F
ASTM D-648	Deflection Temperature - Parallel	Thermal	189°F
ASTM C-273	Shear Test in Flatwise Plane (Ultimate Core Shear Strength)	Bond Integrity	765 psi
ASTM C-297	Tensile Bond Strength Test in Flatwise Plane (Ultimate)	Bond Integrity	1016 psi
ASTM D-1781	Bond Integrity	Bond Integrity	> 22.5 in-lb/in
ASTM E-90	Sound Transmission (STC)	Acoustical	30
ASTM E-90	Sound Transmission (OITC)	Acoustical	24
ASTM C-272	Water Absorption	Physical	0.003%
ASTM D-696	Coefficient of Linear Thermal Expansion	Physical	1.11x10 ⁻⁵ in/in °F
ASTM D-635	Rate of Burning	Fire Performance	Classified CC1
ASTM D-1929	Ignition Temperature - Self	Fire Performance	783°F
ASTM D-1929	Ignition Temperature - Flash	Fire Performance	784°F
ASTM E-84	Surface Burning Characteristics (Flame Spread)	Fire Performance	< 25
ASTM E-84	Surface Burning Characteristics (Smoke Development)	Fire Performance	< 100
CAN/ULC-S102	Surface Burning Characteristics (Flame Spread)	Fire Performance	< 25
CAN/ULC-S102	Surface Burning Characteristics (Smoke Development)	Fire Performance	< 100
CAN/ULC-S134	Flame Spread of Exterior Wall Assemblies	Fire Performance	Meets Criteria**
NFPA 285	Flame Spread of Exterior Wall Assemblies	Fire Performance	Meets Criteria**

*The ASTM (American Society for Testing & 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.

** Results based upon tests made with ALUCOBOND PLUS panels in specific wall assemblies. For more information about assemblies that have been tested, please contact technical support: Thomas.rogers@3acomposites.com

