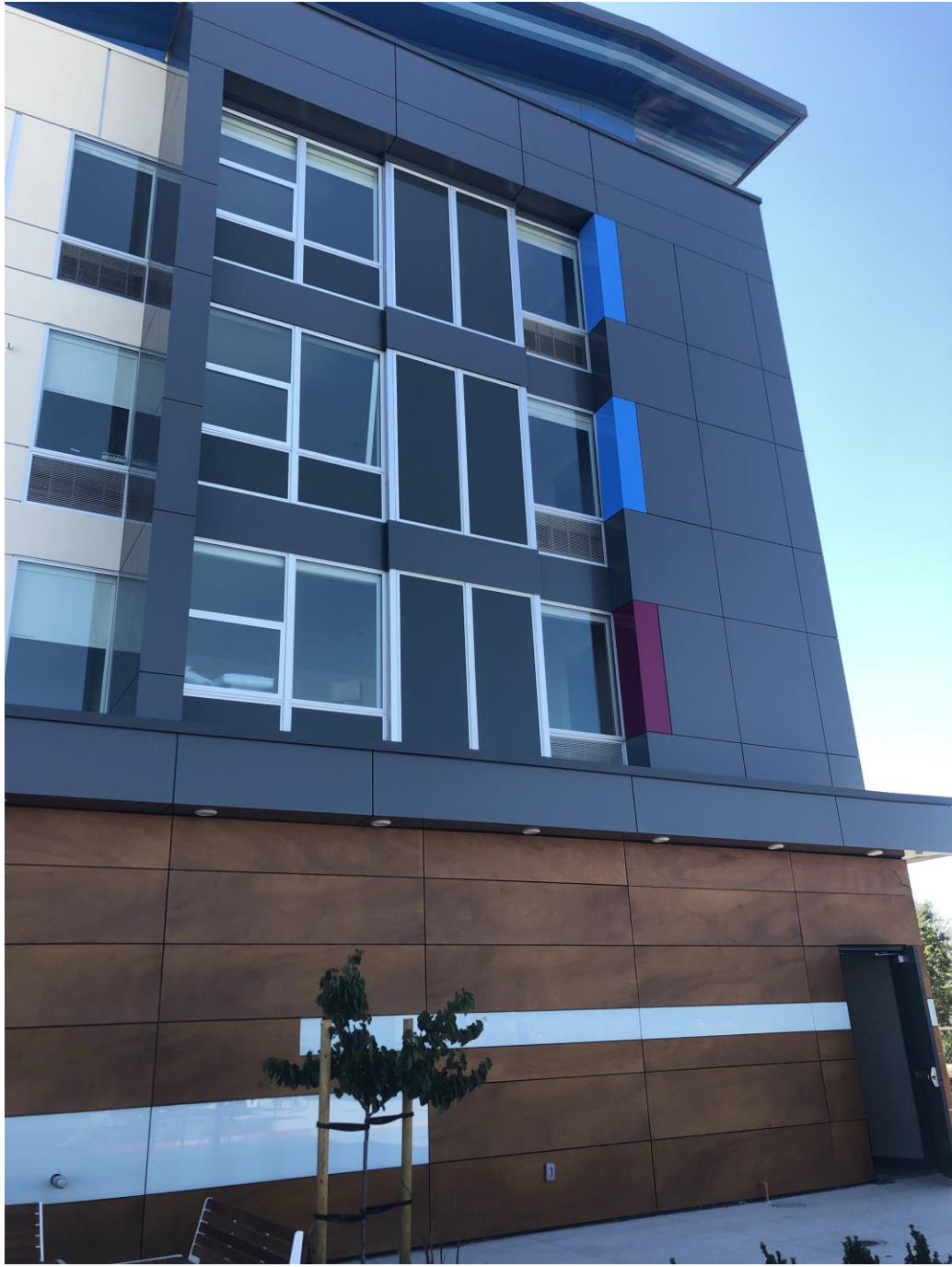




ALLBONDS™
Aluminum Composite Panels





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ALLBONDS™ Specification Data sheet

Standard Panel Sizes Width x Length (inches)

Width (in)	Length (in)
50	122
	146
	196
62	122
	146
	196



ALLBONDS™ PE Technical Information

Physical Properties

Property	Unit			
Panel Thickness	mm (in)	3mm (.118")	4mm (.157")	6mm (.236")
Weight	lb/ft ²	0.97	1.12	1.56
Aluminum Thickness	in	0.020"	0.020"	0.020"
Coefficient of Expansion	in/in'F	1.30x10 ⁻⁵	1.30x10 ⁻⁵	1.30x10 ⁻⁵



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Bond Integrity

Property	Unit	Standard	4mm (.157") Thickness
Drum Peel	in-lb/in	ASTM D-1781	40

*Material has been tested to ASTM D1781 for bond integrity. Peel strength -153Nm/m (minimum) Temperature resistance withstands environment changes from -55°F to +175°F

Product Tolerance

Length – 0 + .375"

Width – 0 + .188"

Thickness ± .008" for 3 to 6mm thicknesses bow (length and/or width): Maximum 0.8% Squareness:

Maximum .250"

Aluminum Sheet Thickness – .020" (nominal)

Fire Performance – Standard ALLBONDS™ polyethylene (PE) panels are tested by an independent testing laboratory using the following nationally recognized fire test:

Property	Unit	Standard	4mm (.157")
Flame Spread	-	ASTM E-84	0
Smoke Developed	-	ASTM E-84	10

Finish

Coil-Coated Kynar 500® / HYLAR® 5000



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ALLBONDS™ FR Technical Information

Physical Properties

Property	Unit		
Panel Thickness	mm (in)	4mm (.157")	6mm (.236")
Weight	lb/ft ²	1.60	2.24
Aluminum Thickness	in	0.020"	0.020"
Coefficient of Expansion	in/in'F	1.30x10 ⁻⁵	1.30x10 ⁻⁵

Bond Integrity

Property	Unit	Standard	4mm (.157")
Drum Peel	in-lb/in	ASTM D-1781	78
Flatwise Tensile Strength	psi	ASTM C-297	13,936

Product Tolerance

Length – 0 + .375"

Width – 0 + .188"

Thickness ± .008" for 3 to 6mm thicknesses bow (length and/or width): Maximum 0.8% Squareness:

Maximum .250"

Aluminum Sheet Thickness – .020" (nominal)



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Fire Performance – Standard ALLBONDS™ fire-retardant panels are tested by an independent testing laboratory using the following nationally recognized fire tests:

Property	Unit	Standard	4mm (.157")
Flame Spread	-	ASTM E-84	0
Smoke Developed	-	ASTM E-84	10
Flash Ignition Temp.	°F	ASTM D1929	824
Flash Ignition Temp.	°C	ASTM D1929	440
Self-Ignition Temp.	°F	ASTM D1929	842
Self-Ignition Temp.	°C	ASTM D1929	450
Fire System Test	-	ASTM E119 (1hr & 2hr)	PASS
Fire System Test	-	NFPA 285	PASS

*NFPA 285 is a system test for evaluation of fire propagation characteristics of exterior wall assemblies containing combustible components. ALLBONDS™ passed this test.

Finish

Coil-Coated Kynar 500® / HYLAR 5000®

1. Manufacturer

ALLBONDS™
940 Saratoga Avenue Unit 112
San Jose, CA 95129
P: 408-334-6820
www.ALLBONDS™.com

2. Product Description

ALLBONDS™ ACM panels are used as cladding for many diverse applications such as office buildings, hospitals, convention centers, airports, hotels, car dealerships, and for critical design elements such as entrances, canopies, column covers, and interior walls. With ALLBONDS™ you add a crisp, clean metal look that will add a premium, modern image to any application. It is light weight, durable, and flexible to any architectural design including curved angles and other geometric configurations.



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3. Composition & Materials

ALLBONDS™ ACM panels with PE core consists of two sheets of smooth 0.02" aluminum thermally bonded to a polyethylene core in a continuous process. ALLBONDS™ ACM panels with FR core consists of two sheets of smooth 0.02" of aluminum thermally bonded to a fire-retardant core consisting of a non-combustible mineral filled core, with no halogen, low smoke and fume. ALLBONDS™ is pre-finished with a premium coil coating that is available in a wide spectrum of attractive standards colors along with an infinite array of any custom color you desire. There are various finishes including but not limited to stone finish, stucco finish decorative, zinc brush, wood brush, bronze brush and more. ALLBONDS™ also offers natural metals and anodized class 1 finishes.

4. Size Availability

ALLBONDS™ ACM panels are available in 3MM, 4MM, and 6MM thickness. To allow for imaginative design and creativity, ALLBONDS™ comes in a variety of lengths and widths. The standard maximum width size is 62" and the standard length size is 196".

5. Finishes

ALLBONDS™ ACM panels come in various finishes including:

- Kynar 500® PVDF tested in accordance with AAMA 2605 resin based fluoropolymer coil coated
- Hylar 5000® PVDF tested in accordance with AAMA 2605 resin based
- Class 1 Anodized – clear & other colors

Standard coating thickness:

- Color: 1.0 Mil (±0.2 Mil)
- Clear: 0.5 Mil (±0.05 Mil)

Custom color matching is available at no extra cost with minimum order quantities.

6. Shapes & Fabrication

ALLBONDS™ ACM panels can be easily cut, bent, curved, and precisely formed using various fabrication techniques to produce different designs, including curves, angles and other shapes as required for both interior and exterior use. Panels can be rolled into a curved shape with a radius as small as 2"

7. Technical Data

ALLBONDS™ ACM may be applied to the following standards: American Architectural Manufacturers Association (AAMA) – AAMA 2605 Voluntary Specifications, Performance Requirements and test procedures for superior performing organic coatings on aluminum panels. ASTM D1210 – 05(2010) Standard Test Method for Fineness of Dispersion of Pigment – Vehicle Systems by Hegman-Type Gage. ASTM D3794 - 13 Standard Guides for Testing Coil Coatings. ASTM D523 - 08 Standard Test Method for Specular Gloss. ASTM D2244 - 11 Standard Practice for Calculation of Color Tolerances and Color Differences from Instrumentally Measured Color Coordinates. ASTM D4145 - 10 Standard Test Method for Coating Flexibility of Pre-painted Sheet. ASTM D3363 - 05(2011) e2 Standard Test Method for Film Hardness by Pencil Test. ASTM D3359 - 09e2 Standard Test Methods for Measuring Adhesion by Tape Test. ASTM D2248 - 01a(2007) Standard Practice for Detergent Resistance of Organic Finishes. ASTM D2794 - 93(2010) Standard Test Method for Resistance of Organic Coatings to the Effects of Rapid Deformation (Impact).



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ASTM E 84-04 Standard Test Methods for Burning Characteristics of Building Materials. In Compliance with section 3.1.5 of ICC ES "Acceptance Criteria for Metal Composite Material", AC25 Effective January 1, 2007 and sections 1407.9, 107.9, and 1407.10.1 of the 2006 International Building Code. ASTM E 119 Standard Test Methods for Fire Tests of Building Construction and Materials. ASTM D1929 Spontaneous and Flash Ignition Temperature. NFPA 285 Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Wall Assemblies Containing Combustible Components.

ASTM D1781-98 "Standard Test for Drum Peel for Adhesives" for compliance with section 4.5.2 of ICC ES AC25 for bonded MCM panels. Freeze -Thaw test in accordance with section 4.6 of ICC ES AC25 for compliance with section 4.6.4.1 of ICC ES AC25 for bonded MCM panels. ASTM E283 - 04 (2012) Standard Test Method for Determining Rate of Air Leakage through Exterior Windows, Curtain Walls, and Doors under Specified Pressure Differences across the Specimen.

ASTM E330 - 02(2010) Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference. ASTM E331 - 00(2009) Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference.

8. Installation

The manufacturer recommends field measure prior to fabrication. Verify alignment of surfaces to receive panels. ALLBONDS™ surfaces can be attached to other materials by conventional methods of attachment such as rivets, bolts or screws. For interior installation, flat surfaces of ACM can be attached to a substrate such as gypsum board using double sided tape or non - hardening adhesives. ALLBONDS™ panels are pre-finished architectural products requiring care in handling to avoid damage to the finish. Handle, store, fabricate, install, and clean panels following ALLBONDS™ recommendations with respect to expansion and contraction of ACM panels.

9. Maintenance

Scheduled professional maintenance & cleaning is needed for the surface of the ACM panels. Such maintenance is not only to keep the building's wall clean, but also to remove the harmful stains on the coating to keep its long-term quality. The maintenance & cleaning frequency depends on the environment and actual pollution conditions of the aluminum composite panel. ALLBONDS™ suggests that exterior decoration be cleaned at least one time per year. As for interior decoration, the cleaning is dependent upon the air quality conditions. Please refer to the ALLBONDS™ Cleaning Instruction details for more information.

10. Warranty

The fabricator and installer will warrant the wall system for a period of one (1) year that the fabrication and installation workmanship will be free from defects.

The aluminum composite material manufacturer shall warrant for a period of twenty (20) years against Max 5 fade based on ASTM D2244 and Max 8 chalk based on ASTM D4212 and delamination of the paint finish.

The aluminum composite material manufacturer shall warrant for a period of ten (10) years that the material will be free from defects including delamination.

11. Technical Services

Contact an ALLBONDS™ sales representative for technical assistance with design and specifications.