



ALFLEX PLATE 0.080" (2mm) TECHNICAL DATA SHEET

COMPOSITION

Aluminum Plate Alloy	3003-H14
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STANDARD SIZES

PROPERTY	VALUES	UNITS
Standard Thickness (nominal)	0.080	in
	2.0	mm
Other Available Thicknesses (nominal)	0.125	in
	3.0	mm
Standard Width	49.2 60.0	in
	1,250 1,524	mm
Custom Width Range	31.5 - 62.0	in
	800 - 1600	mm
Standard Length (max)	120	in
	3050	mm

PRODUCTION TOLERANCES

PROPERTY	VALUES	UNITS
Width	+/- 0.080	in
	2.0	mm
Length	+/- 0.157	in
	4.0	mm
Thickness	+/- 0.004	in
	0.10	mm

ASTM B209 COMPLIANCE: 3003-H14 ALUMINUM

CHEMICAL COMPOSITION

ELEMENT	STANDARD	RESULTS
Aluminum	Remainder	97.75%
Copper	0.05% - 0.2%	0.17%
Iron	0.0% to 0.7%	0.56%
Manganese	1.0% - 1.5%	1.19%
Silicon	0.0% to 0.6%	0.18%
Zinc	0.0% to 0.1%	0.00%
Other Elements	0.0% to 0.15%	0.15%

MECHANICAL PROPERTY LIMITS

PROPERTY	STANDARD	RESULTS
Tensile (ksi)	20 ksi min - 26 ksi max	21.4 ksi
Yield Strength	17 ksi min	18.5 ksi
Elongation	2% Min	25%

FINISH WARRANTY

See warranty tables and sample warranties for conditions and exclusions

PVDF Coil Coated Finish	20 Years
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TECHNICAL PROPERTIES

PROPERTY		VALUES	UNITS
Panel Weight		1.11	lb/ft ²
		5.40	kg/m ²
Specific Gravity (Product)		2.72	g/cc
Coefficient of Expansion		12.9	in/in/°F (@ 68-212°F)
Modulus of Elasticity	ASTM E8	10 X 10 ⁶	Psi
		69X 10 ³	Mpa
Moment of Inertia		4.27 X 10 ⁻⁵	in ⁴ /in
		1.69 X 10 ⁻⁵	cm ⁴ /m
Section Modulus		1.07X 10 ⁻³	in ³ /in
		1.69 X 10 ⁻⁴	cm ³ /m
Tensile Strength	ASTM E8	20.3 X 10 ³	Psi
		140	Mpa
Yield Strength	ASTM E8	17.4X 10 ³	Psi
		120	Mpa
Elongation	ASTM E8	5	%
Thermal Conductivity	C518	193	W/(m•K)

ARCHITECTURAL COATING PERFORMANCE

AAMA 2605-13 STANDARD COMPLIANCE

70% Kynar 500 / Hylar 5000 PVDF Resin Coatings

PROPERTY	TEST STANDARD	REQUIREMENT	RESULTS
Dry Film Thickness	ASTM D7091	≥ 23 microns	Pass - 32 microns
Color Uniformity	ASTM D2244	Max. 2 Delta E	Pass - < 2 units
Color Retention - Fade	ASTM D2244	Delta E ≤ 5 units	Pass - < 5 units
Chalk Rating	ASTM D4214	≤ 8 units	Pass - < 8 units
Specular Gloss	ASTM D523	± 5 units	Pass
Dry Film Hardness	ASTM D3363	F - 2H	Pass - 3H
Dry Adhesion	ASTM D3359	No coating removal	Pass - no removal
Abrasion Resistance	ASTM D968	Abrasion Coefficient Value ≥ 40	Pass - 51
Reverse Impact	ASTM D2794	No coating removal	Pass - no removal
Muriatic Acid Resistance (10% HCl, 15 mins)	ASTM D1308	No blistering or visual change	Pass - no blistering or visual changes
Nitric Acid Resistance (HNO ₃ , 30 mins)	ASTM D1308	≤ 5 Delta E	Pass - 0.2
Alkali Mortar Resistance (10%, 25% NaOH, 60 mins)	ASTM D1308	No removal. No loss of adhesion or visual change	Pass - no adhesion loss
Flexibility	ASTM D4145	2T - no pick off	Pass - no pick off
Humidity Resistance	ASTM D714	4000 hour exposure	Pass - No #8 blisters
	ASTM D2247	Less than "few" blisters Size No. 8	
Cyclic Corrosion	ASTM B117	2000 hour exposure.	Pass - 10 rating
	AAMA 2605-13	Min rating of 7 scribe or cut edge Min. blister rating of 8	

FIRE PERFORMANCE FOR NON-COMBUSTIBILITY

STANDARD	STANDARD TEST METHOD	RESULTS
ASTM E136	Behavior of Materials in a Vertical Tube Furnace at 750°C.	PASS Meets Standard
CAN/ULC S114*	Determination of Non-Combustibility of Building Materials	PASS Meets Standard
CAN/ULC S135*	Determination of Combustibility Parameters of Building Materials Using an Oxygen Consumption Calorimeter	PASS Meets Standard

* Test Conducted on 3mm Plate