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PRODUCT GUIDE



ALFLEX FR

ALFREX, LLC

Alfrex, LLC is specialized in fire-resistant and non-combustible architectural metal wall cladding with a portfolio including Alfrex FR Metal Composite Material, matching flat sheet, coil coated aluminum Alfrex Plate, and primer coated Alfrex plate for post painting small lot, custom colors.

Its parent company, Unience, Co Ltd., began operation in 2000 as a manufacturer of specialty fire-resistant coatings, bonding materials, and pelletized mineral filled compound for the manufacture of Fire-Resistant FR Aluminum and Metal Composite Panels (MCM). In 2008, after supplying numerous major MCM brands with FR compound, Unience launched Alfrex FR ACM in South Korea with a multi-line MCM production facility dedicated to the exclusive production of FR ACM utilizing in-house, fire-resistant core technology. Sales growth across 5 continents prompted the 2016 move of Unience's Global Headquarters to the USA and the establishment of Alfrex, LLC, with North American commercial offices in Atlanta and Toronto.

In mid-2020, Alfrex will commence production at its new FR-only MCM production facility in Buford, Georgia. The operation will provide the market with a more competitive domestically produced FR ACM product with shorter lead times, and a differentiated extended product line including 3mm thick, non-combustible, coil coated aluminum plate.

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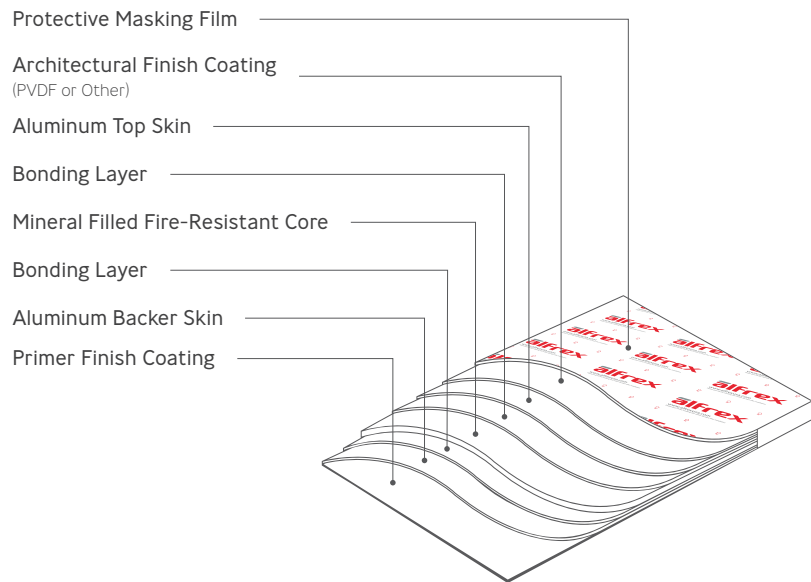
PRODUCT INTRODUCTION

ALFLEX FR

Alflex FR is a continuous process manufactured aluminum composite material (ACM) consisting of an extruded fire-resistant core permanently bonded to pre-finished aluminum skins on each side. It is extremely lightweight and exceptionally flat, yet easy to fabricate into any shape. **Alflex FR** is coil coated utilizing 70% PVDF Kynar resin and other high-quality paint finishes – providing color uniformity, an extensive range of colors, unique coating patterns and textures, and the confidence of industry standard performance warranties. Its properties make **Alflex FR** an ideal choice for most any architectural design intent imaginable.



PRODUCT COMPOSITION



PRODUCT FEATURES

Coil Coated for Performance

Alfrex FR premium quality paint finishes are applied by coil coating lines specialized in the continuous roll coating of fluoropolymer and specialty paint coating systems. The process ensures superior color uniformity and the overall long-term performance expected of exterior architectural coatings.

Wide Standard Color Range

Alfrex FR is offered in a broad range of standard colors geared towards exterior architectural building applications. Finishes utilizing 70% PVDF Kynar resin span popular color ranges in 2-coat solid, 2-coat mica, and 3-coat metallic configurations. Other specialty finishes include Prismatic Color-Shifting, Textured Wood Grain, Stone, Brushed Aluminum, and Faux Natural Metals.

Custom Colors

Alfrex provides custom matching to transform your imagination into reality using the color or finish of your choice. Simply send us a color sample, coating manufacturer paint code, Pantone number, or PMS number, and we'll quickly turn around an accurate match that meets your project requirements.

Fire-Resistance is a Core Competency

The fire-resistant core of Alfrex FR is an in-house manufactured, mineral-filled extruded material permanently bonded to aluminum skins. This provides an economical advantage for customers without sacrificing quality. Alfrex FR has passed American and Canadian testing standards including ASTM E84, ASTM E119, NFPA 285, CAN/ULC S102, and CAN/ULC S134.

Lightweight and Highly Durable

Alfrex FR is lightweight, at only 1.51 lbs / sqft, yet durable with non-corrosive aluminum skins and weather resistant architectural coatings.

Ease of Fabrication and Formability

Alfrex FR can be fabricated using proven methods such as: cutting, routing, shearing, bending, folding, and roll forming.



REFERENCE DATA

STANDARD SIZE

Total Thickness:	.160" (4mm)
Top Skin Thickness:	.020" (.5mm)
Backer Skin Thickness:	.020" (.5mm)
Widths:	40.2" (1,020mm)
	49.2" (1,250mm)
	50.0" (1,270mm)
Length:	62.0" (1,575mm)
	Max 25' (7,620mm)*

*Please contact us for custom length requests exceeding max length.

TOLERANCES

Width:	+/- .080" (2mm)
Length:	+/- .160" (4mm)
Square:	+/- .160" (4mm)
Bow:	0.5% of the length and/or width

TECHNICAL PROPERTIES

	PROPERTY	TEST	UNIT	RESULTS
Physical Properties	Specific Gravity:	-	g / cc	1.84
	Weight:	-	lbs / ft ²	1.51
	Coefficient of Expansion:	ASTM E831	in / in • °F	182 x 10 ⁻⁶ (@ 32-212°F)
	Thermal Conductivity:	ASTM C518	W / m • K	0.422
	Deflection Temperature:	ASTM D648	°F	> 428
Mechanical Properties of Composite Material	Tensile Strength:	ASTM E8	psi	7,900
	Yield Strength:	ASTM E8	psi	7,500
	Elongation:	ASTM E8	%	3.6
	Flexural Elasticity:	ASTM C393 / D790	psi	5,740 X 10 ³
	Sound Transmission Loss:	ASTM E413	STC	27 (Calculated)

