

alfrex

Fire Resistant & Non-Combustible Cladding



PRODUCT GUIDE
ALFLEX FR

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ABOUT ALFLEX, INC.

Alflex, Inc. specializes in fire-resistant and non-combustible architectural metal wall cladding with a portfolio including Alflex FR Metal Composite Material, matching flat sheet, coil coated aluminum Alflex Plate, and primer coated Alflex Plate for post painting small lot, custom colors. The company history and highlights include:

- 2000:** Parent company Unience, Ltd. founded manufacturing fire-resistant compounds
- 2008:** Alflex FR Metal Composite Material launched with 2 manufacturing lines
- 2016:** Alflex USA commercial offices opened
- 2017:** Alflex Canada commercial office opened
- 2019:** Alflex Plate - coil coated architectural aluminum plate added to portfolio
- 2020:** New FR - core only MCM manufacturing plate and global headquarters inaugurated in Buford, Georgia USA
- 2020:** All required product testing and certifications for the USA and Canada completed for Alflex FR MCM and Alflex Plate

PRODUCT LINES

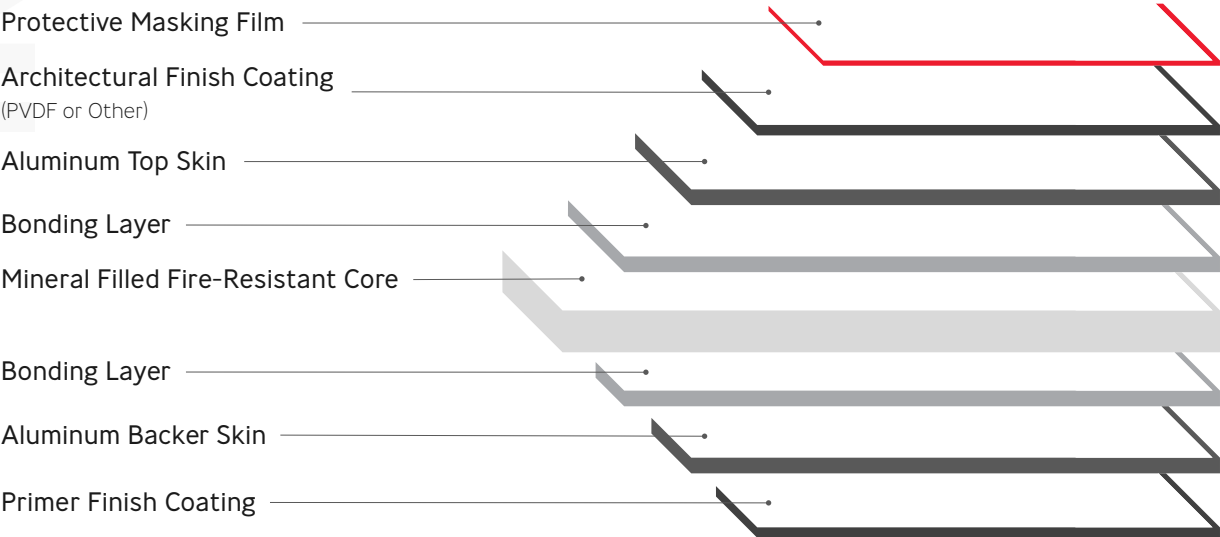
- Alflex FR MCM Metal Composite Material Wall Panels
- Alflex Plate Pre-Finished Architectural Wall Panels
- Matching Flat Sheet and Trim Profiles

ALFLEX FR INTRODUCTION

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.

ALFLEX FR COMPOSITION





ALFLEX FR FEATURES



COIL COATED FOR PERFORMANCE

Alflex 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

Alflex 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

Alflex 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 will quickly turn around an accurate match that meets your project requirements.



FIRE-RESISTANCE IS A CORE COMPETENCY

The fire-resistant core of Alflex 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. Alflex 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

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



EASE OF FABRICATIONS AND FORMABILITY

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



ALFREX FR REFERENCE DATA

STANDARD SIZES

PROPERTY	4mm FR		UNITS
Panel Thickness	0.157		in
	4.0		mm
Top & Backer Skin Thickness (nominal)	0.020		in
	0.5		mm
Standard Widths	50	62	in
	1,270	1,575	mm
Other Available Widths <small>*Widths only available upon request</small>	40	49.2	in
	1,020	1,250	mm

TOLERANCES

PROPERTY	4mm FR		UNITS
Width	+ / - 0.080		in
	2.0		mm
Length	+ / - 0.157		in
	4.0		mm
Thickness	+ / - 0.008		in
	0.2		mm
Squareness	+ / - 0.157		in
	4		mm

TECHNICAL PROPERTIES

PROPERTY	STANDARD	4mm FR		UNITS
Panel Weight	-	1.51		lb/ft ²
		7.37		kg/m ²
Flexular Modulus (Flexural Elasticity)	ASTM C393	5.38 x 10 ⁶		Psi
		3.79 x 10 ³		Mpa
Modulus of Elasticity	ASTM E8	2.46 x 10 ⁶		Psi
		17.00 x 10 ³		Mpa
Tensile Strength (aluminum skin)	ASTM E8	6.96 x 10 ³		Psi
		48		Mpa
Yield Strength	ASTM E8	6.23 x 10 ³		Psi
		43		Mpa
Elongation	ASTM E8	5		%
Moment of Inertia	-	1.90 x 10 ⁻⁴		in ⁴ /in
		1.36 x 10 ⁻³		cm ⁴ /m
Section Modulus	-	1.81 x 10 ⁻³		in ³ /in
		6.77 x 10 ⁻³		cm ³ /m
Coefficient of Expansion	ASTM D696	1.44 x 10 ⁻⁵		in/in/°F (@-22-86°F)



PRODUCT CERTIFICATIONS

BUILDING CODES

ICC AC-25	Certificate WHI18-26206601 (Spec ID 36858)	
ICC-ESR Evaluation Report	ESR-4566	
ICC-ESR Supplements [California]	CBC	California Building Code
	DSA	Division of the State Architect
	OSHPD	Office of Statewide Health Planning Development
	LABC	Los Angeles Building Code
Los Angeles Research Report	Per IB119 exempt with ICC ESR	
Florida Product Approval	FL I5337 (R2, R3, R4, R5)	

FIRE PERFORMANCE

ASTM E84	Class A
ASTM E119	Fire Rating - 2 hours
NFPA 285	Passed
CAN/ULC S102	Class A
CAN/ULC S134	Passed
ASTM D635	Classified CC1

ALFREX MATCHING FLAT SHEET

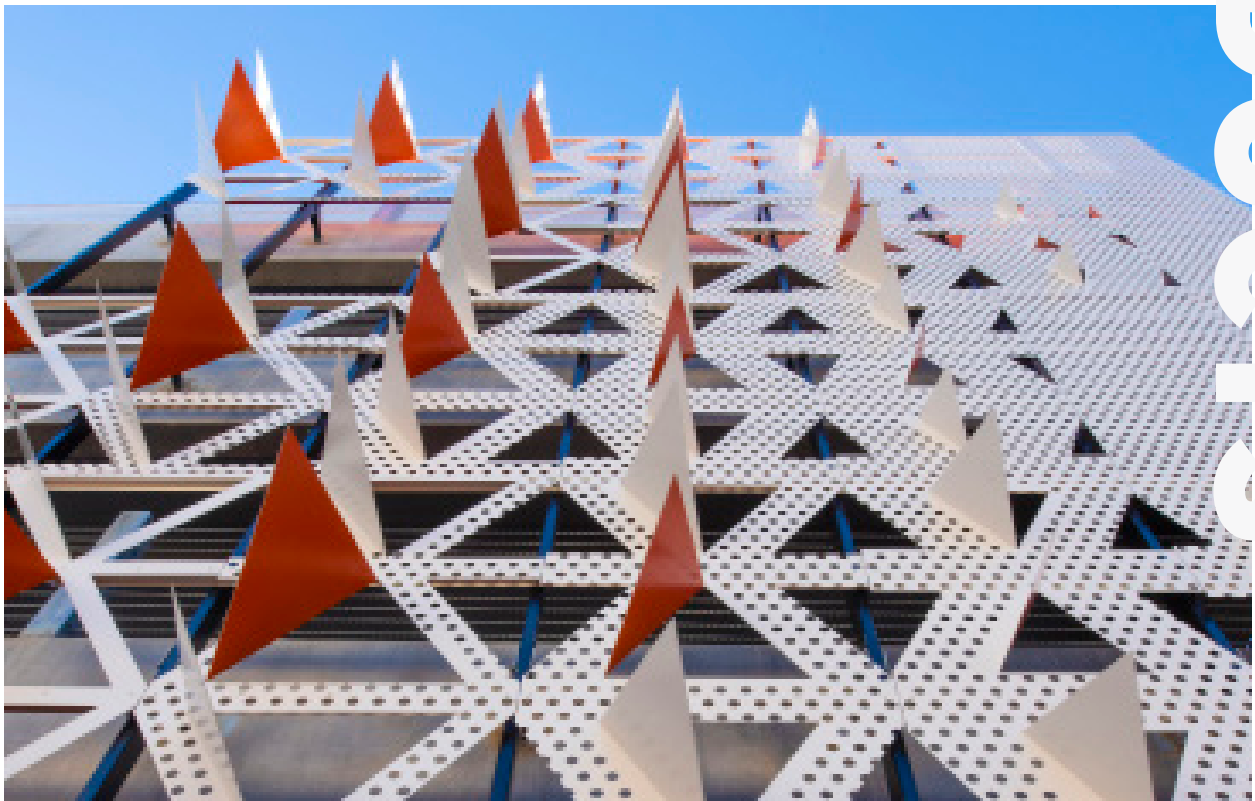
Alfrex stocks tension leveled 0.040" (1mm) aluminum flat sheet in coordinated standard colors.

ALFREX PLATE : CUSTOMIZABLE AND NON-COMBUSTIBLE

Coil Coated 3mm Plate is a standard with Alfrex Plate. Projects requiring a non-combustible solution can count on Alfrex Plate coil coated in coordinated colors with Alfrex FR as well as custom colors.

Small Lot Custom Colors for MCM are very expensive and difficult to source. Alfrex offers a solution by stocking Alfrex 3mm thick aluminum plate in 62" wide x 165" long sheets with a primed back side. This enables the post-painting of sheets in both air dry or backed on spray finishes, and a more economical solution than purchasing the minimum quantities for a custom ACM color.

For more information on Alfrex Plate, please consult the Alfrex Plate Product Guide or visit www.alfrexusa.com





943 Gainesville Hwy. Bldg 100-4000 Buford, GA 30518
alfrexusa.com | 470.589.7449 | contact@alfrexusa.com

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