

alfrex

Fire Resistant & Non-Combustible Cladding



ALFREX PLATE
P R O D U C T G U I D E

TABLE OF CONTENTS

2	About Alfrex, Inc.
3	Product Introduction
3	Product Composition
4	Product Features
5	Reference Data
6	Fire Test Performance
6	Additional Products and Publications

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 plant 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
- 2021:** Alflex launches Matching 0.040" Flat Sheet and Trim-Profiles Program

PRODUCT LINES

Alflex FR MCM Metal Composite Material Wall Panels

Matching 0.040" Flat Sheet

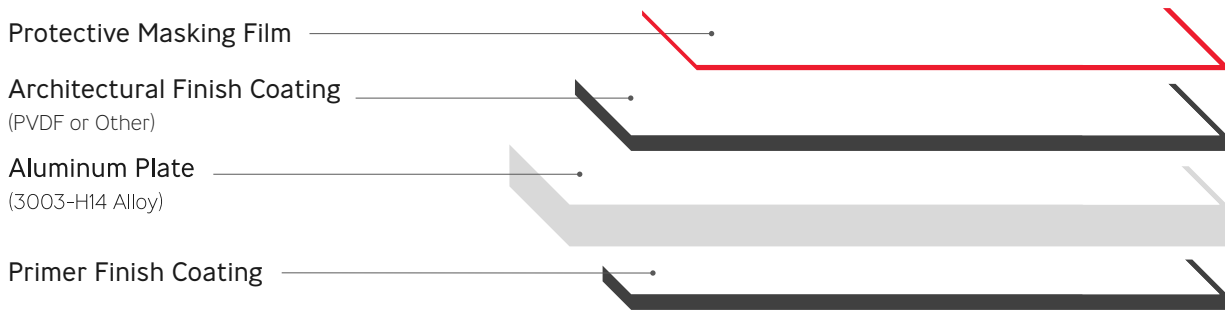
Matching 0.040" Trim Profiles

Alflex Plate Pre-Finished Architectural Wall Panels

ALFLEX PLATE INTRODUCTION

Alflex Plate is a 100% solid aluminum, non-combustible wall cladding panel. With a standard thickness of 0.125" (3mm) by a maximum 62" width, it is also available in 0.100" (2.5mm), 0.080" (2mm), as well as custom widths. It is pre-finished by coil coating lines specialized in handling heavier gauge solid aluminum coil, tension leveled, and cut to length per the requirements of each project. Its 70% PVDF Kynar resin paint system ensures color consistency and outstanding UV protection, and can be coated in coordination with Alflex FR ACM standard or custom colors. The backside is primer coated to minimize oxidization and enable post-paint spray coating for small lot custom colors, where air dry or baked finishes are desired.

ALFLEX PLATE COMPOSITION





ALFLEX PLATE FEATURES



NON-COMBUSTIBILITY

Alflex Plate is non-combustible 100% solid aluminum, 3003-H14 alloy. For applications where meeting local building codes or satisfying owner preference is mandated, a non-combustible metal wall cladding option may be desired. Alflex Plate fits this requirement and much more.



COIL COATED ALUMINUM PLATE

Architectural quality coil coated finishes are rarely available on plate thickness greater than 0.080". With Alflex 3mm Plate, "Coil Coated" is the standard. Projects requiring a non-combustible solution with greater panel spans can count on Alflex 3mm Plate, coil coated with the same wide range of finishes and exterior coating performance warranties as Alflex FR MCM.



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.



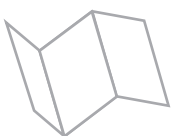
SMALL LOT CUSTOM COLORS

Alflex stocks 3mm thick aluminum plate in 62" wide x 165" long sheets with a primed back side. This enables the post-painting of sheets in either air dry or baked on spray finishes, eliminating the need for customers to source sheets from multiple sources. This capability also provides a more economical solution for small, custom color requirements where coil coating minimums cannot be met.



CUT TO LENGTH FOR THE PROJECT

Alflex Plate is tension leveled and cut to length per the requirements of each individual project. With a minimum quantity of 20 sheets per length, customers can take off and optimize Alflex Plate in the same manner as Alflex FR MCM - reducing scrap and processing costs.



COMPATIBILITY AND FORMABILITY

Alflex Plate can be fabricated using proven methods such as: cutting, routing, shearing, bending, folding, and roll forming. It can be folded to a 2T bend naturally, and to 90 degrees when routed from the back side. This enables closer compatibility between Alflex Plate and popular MCM installation systems with only slight modifications.



ALFLEX PLATE REFERENCE DATA

STANDARD SIZES

PROPERTY	3mm Plate			UNITS
Thicknesses (nominal)	0.125	0.100	0.080	in
	3	2.5	2	mm
Widths <small>*41.3in (1,050mm) width is available upon request.</small>	62.0	49.2	41.3*	in
	1,575	1,250	1,050*	mm
Lengths	Max 165			in
	Max 4,191			mm

TOLERANCES

PROPERTY	3mm Plate	UNITS
Width	+ / - 0.080	in
	2.0	mm
Length	+ / - 0.157	in
	4.0	mm
Thickness	+ / - 0.004	in
	0.1	mm

TECHNICAL PROPERTIES

PROPERTY	STANDARD	3mm Plate	UNITS
Aluminum Plate Alloy	-	3003-H14	
Panel Weight	-	1.66	lb/ft ²
		8.10	kg/m ²
Specific Gravity (Product)	-	2.72	g/cc
Coefficient of Expansion	-	12.9 x 10 ⁻⁶	in/in/°F (@ 68-212°F)
Modulus of Elasticity	ASTM E8	10 x 10 ⁶	Psi
		69.0 x 10 ³	Mpa
Moment of Inertia	-	1.37 x 10 ⁻⁴	in ⁴ /in
		5.7 x 10 ⁻³	cm ⁴ /m
Section Modulus	-	2.32 x 10 ⁻³	in ³ /in
		38.0 x 10 ⁻³	cm ³ /m
Tensile Strength	ASTM E8	20.3 x 10 ³	Psi
		140.0	Mpa
Yield Strength	ASTM E8	17.4 x 10 ³	Psi
		120.0	Mpa
Elongation	ASTM E8	25	%
Thermal Conductivity	C518	193	W/(m•K)



FIRE PERFORMANCE

TEST

RESULT

ASTM E136	Non-Combustible
CAN/ULC-S135	Passed
CAN/ULC-S134	Passed
FM 4473 "Modified" Impact Resistance	Passed

ALFLEX MATCHING FLAT SHEET

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

ALFLEX FR MCM : FIRE-RESISTANT AND CUSTOMIZABLE

Alfrex FR is a continuous process manufactured metal composite material (MCM) 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. Alfrex 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 Alfrex FR an ideal choice for most any architectural design intent imaginable.

For more information on Alfrex FR MCM, please consult the Alfrex FR Product Brochure or visit www.alfrexusa.com





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