Architectural
Brochure

AMERACORE
ALUMINUM COMPOSITE MATERIAL
By Alumanate

MADE IN USA

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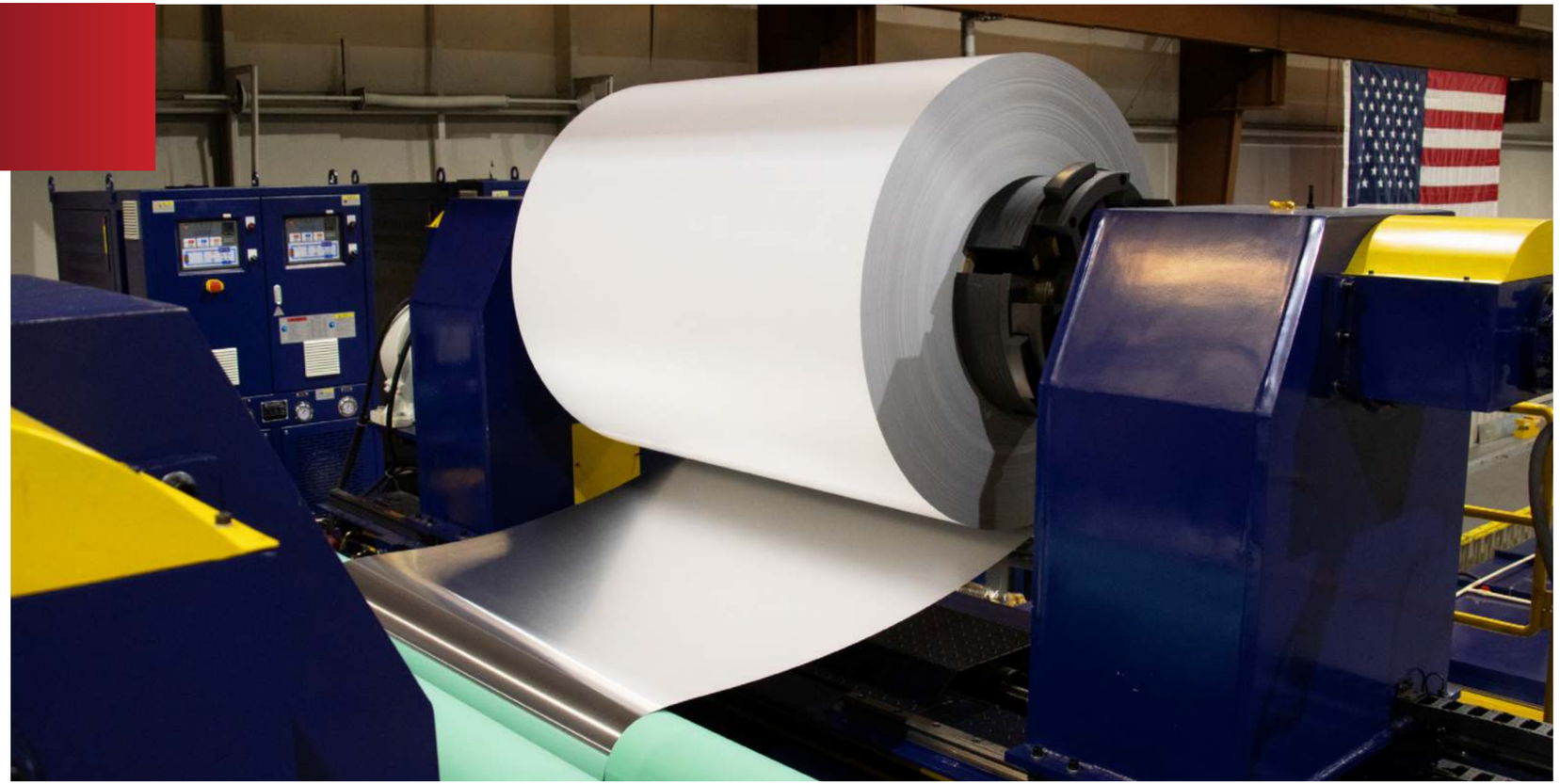


ABOUT

Alumanate

Founded in 2016, Alumanate proudly brought metal composite manufacturing home to the U.S.A. at the start of 2024. We are the only manufacturers of signage-grade aluminum composite material (ACM) in the U.S.A. Based in Houston, Texas, our factory features state-of-the-art manufacturing machinery and technology, giving us an annual capacity of 50,000,000 sqft. Our American ingenuity combined with the excellent raw materials found here in America, allow us to produce an exceptional ACM sheet at a competitive price point.

Driven by innovation and a commitment to quality, Alumanate leads the industry in producing superior architectural-grade aluminum composite material, proudly made in the heart of the USA.

Alumanate Architectural

Alumanate is dedicated to the manufacturing of aluminum composite material (ACM) for building, construction and signage applications. Regardless if you're an architect, designer, fabricator or installer, we are committed to helping you overcome your project challenges and ultimately achieve your vision with beautiful and affordable aluminum composite material. Our stylish and functional cladding solutions for both interior and exterior applications will bring durability paired with pristine looks for years to come.

PRODUCT AVAILABILITY

Alumanate Architectural panels are available in various sizes such as 48", 50" and 62" wide, and lengths of 96", 120", 146" and 196". With multiple warehouse locations across the United States, Alumanate is the largest stock-holder of ACM in the country.

SPECIALTY FINISHES

From textured wood grain to sand stone and granite, Alumanate has over 30 stock colors and textures to choose from. In addition, we specialize in custom color matching and design.

PRODUCT INFORMATION

Alumanate Architectural ACM is composed of two sheets of aluminum bonded to either a mineral-based FR (fire resistant) or PE (polyethylene) core. Alumanate Architectural ACM can be used for many applications such as exterior and interior cladding, column covers, canopies and even clean rooms. The versatile nature of Alumanate Architectural ACM enables architects to deliver inspiring, original and innovative design solutions while adhering to sustainable design standards.

FIRE RESISTANT

Fire safety is important for any building project, and a fire-retardant panel is typically required in buildings that exceed a minimum height as specified by applicable codes. Alumanate FR is one of the most advanced fire-retardant materials available and meets ASTM E84, NFPA 285, CAN/ULC S102, CAN/ULC S134.

EFFORTLESS FABRICATION

Alumanate ACM is easy to fabricate using ordinary wood and metalworking tools, and can be formed into complexly bent and radiused shapes. Our ACM can accommodate virtually any architectural fastening system, and are perfect for curtain wall façades, rainscreen systems, interior walls, corporate signage and more.

COLOR THAT INSPIRES BRILLIANCE

Maximum brand impact comes from forming a long-lasting customer impression. Around the world, companies rely on Alumanate to amplify the visual impact of their brands. Offering long-term, cost-effective solutions for retail chains and their designers, Alumanate panels are durable, weather resistant and easy to maintain.

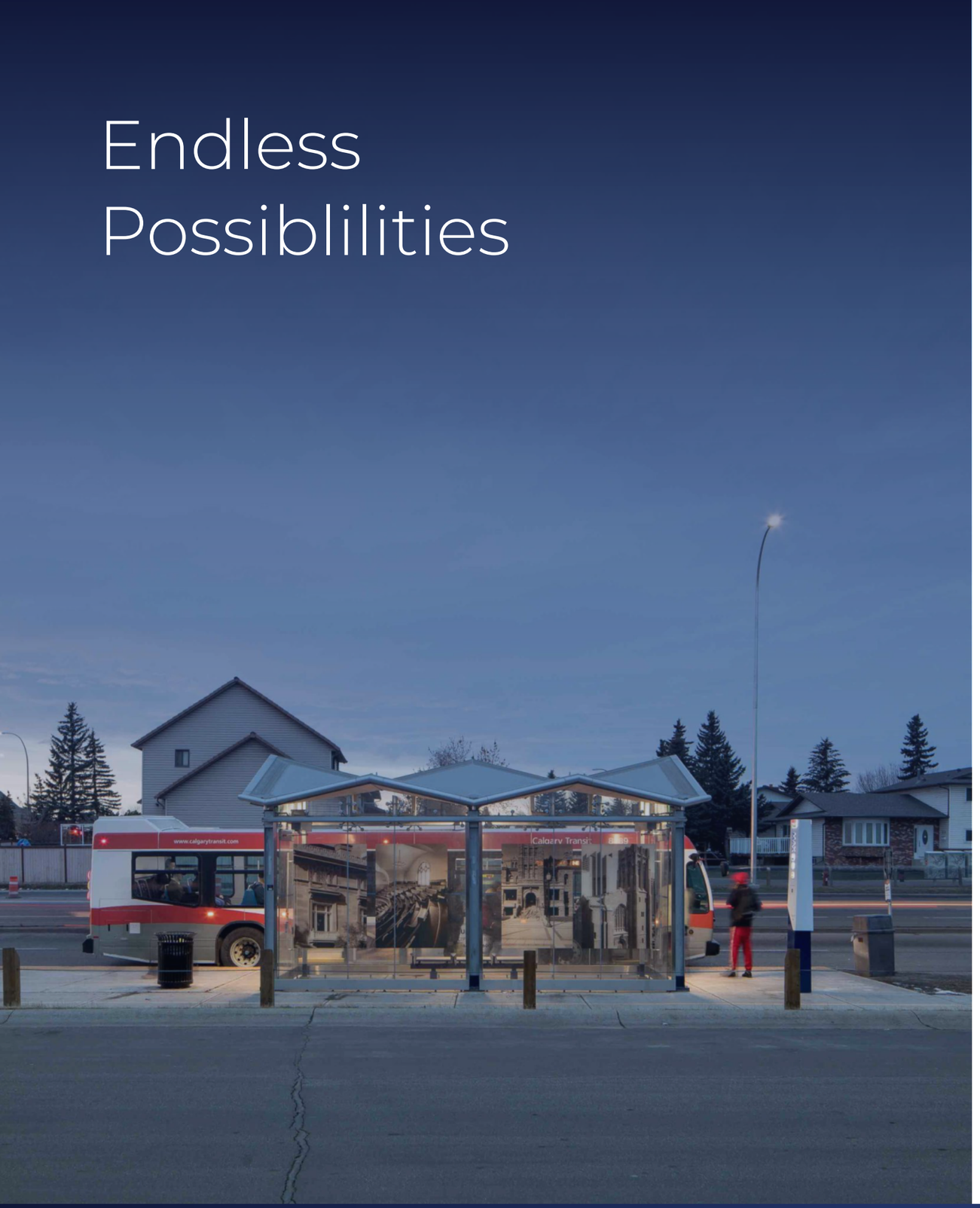
PVDF KYNAR 500

Our paint system delivers flexibility that enables architects and designers to explore the most imaginative and eye-catching solutions. PVDF paint finishes are formulated for high UV resistance with the capability of delivering bright & vibrant colors with warranty programs up to 25 years. PVDF is simple to clean, helping to reduce the maintenance costs over the life of a brand image. Custom colors can be mixed to ensure a precise color match for any application.

FLUOROPOLYMER FINISHES

High-performing, coil-coated FEVE finishes allow color matching at the highest uniformity. Fluoropolymer technology provides excellent flexibility and film adhesion for forming, with superior resistance to humidity, impact, salt spray, pollution and abrasion. With warranty programs up to 30 years, FEVE finishes are considered the premier architectural coatings for metal.

Endless Possiblilities



TECHNICAL DATA

Product Composition

Panel Thickness (mm)	4mm
Aluminum Skin Thickness (in)	0.020" (± 0.002")
Core Composition	Mineral Based Fire Retardant Core
Front Side Finish	PVDF Kynar 500 or 3-Coat FEVE
Reverse Side Finish	Corrosion Resistant Primer Coat

Product Characteristics

Width (in)	48", 60", 62" (Custom Widths Available)
Length (in)	96", 120", 144", 196" (Custom Lengths Available)
Weight	1.55 lb/ft2
Tolerance In Squareness (mm)	± 5mm
Tolerance In Bow (mm)	≤ 3mm/500mm over lengths and widths

Product Performance

Rigidity	2138 lb/in2
Moment of Inertia	0.000208 in/in4
Section Modulus	0.00272 in/in4
Temperature Resistance (°F)	-55°F to 175°F
Thermal Expansion (in/ft)	0.029 in/ft

ENGINEERING PROPERTIES

Standard Test Method*	Description	Category	4mm FR
ASTM D-635	Rate of Burning	Fire Performance Properties	Classified CC1
ASTM D-1929	Self Ignition Temperature	Fire Performance Properties	783˚F
ASTM D-1929	Flash Ignition Temperature	Fire Performance Properties	784˚F
ASTM E-84	Surface Burning Characteristics (Flame Spread Index)	Fire Performance Properties	0
ASTM E-84	Surface Burning Characteristics (Smoke Development Index)	Fire Performance Properties	0
CAN/ULC-S102	Surface Burning Characteristics (Smoke Development Index)	Fire Performance Properties	30
CAN/ULC-S102	Surface Burning Characteristics (Flame Spread Index)	Fire Performance Properties	0
ASTM C-365	Flatwise Compression Strength (Ultimate)	Mechanical Properties	9,220 psi
ASTM C-393	Core Shear Properties (Perpendicular) Ultimate Facing Bending Stress	Mechanical Properties	24,680 psi
ASTM C-393	Core Shear Properties (Parallel) Ultimate Facing Bending Stress	Mechanical Properties	22,460 psi
ASTM D-790	Flexural Modulus (Perpendicular)	Mechanical Properties	1,888 ksi
ASTM D-638	Ultimate Flexural (Perpendicular)	Mechanical Properties	18,521 psi
ASTM D-732	Flexural Modulus (Parallel)	Mechanical Properties	1,814 ksi
ASTM D-732	Ultimate Flexural (Parallel)	Mechanical Properties	17,688 psi
ASTM C-518	Yield Flexural Stress (Perpendicular)	Mechanical Properties	6,644 psi
ASTM C-518	Yield Flexural Stress (Parallel)	Mechanical Properties	6,923 psi
ASTM C-518	Modulus of Elasticity (Perpendicular)	Mechanical Properties	2,926 ksi
ASTM D-648	Tensile Strength (Perpendicular)	Mechanical Properties	7,725 psi
ASTM D-648	Tensile Strength at 0.20% Offset (Perpendicular)	Mechanical Properties	6,545 psi
ASTM C-273	Elongation (Perpendicular)	Mechanical Properties	14.2%
ASTM C-297	Punching Shear (Maximum Shear Load)	Mechanical Properties	2,190 lbs
ASTM D-1781	Punching Shear (Shear Strength)	Mechanical Properties	4,605 psi
ASTM E-90	Thermal Conductivity	Thermal Properties	U = 6.5 btu/hr ft² ˚F
ASTM E-90	Thermal Resistance	Thermal Properties	R = 0.16
ASTM C-272	Thermal Conductance	Thermal Properties	6.25
ASTM D-790	Deflection Temperature (Perpendicular)	Thermal Properties	185°C
ASTM D-790	Deflection Temperature (Parallel)	Thermal Properties	189°C
ASTM D-790	Shear Test in Flatwise Plane (Ultimate Core Shear Strength)	Bond Integrity Properties	765 psi
ASTM D-790	Tensile Bond Strength Test in Flatwise Plane (Ultimate)	Bond Integrity Properties	1,009 psi
ASTM D-790	Bond Integrity	Bond Integrity Properties	123 N mm/mm
ASTM D-638	Sound Transmission (STC)	Acoustical Properties	30
ASTM D-638	Sound Transmission (OITC)	Acoustical Properties	24
ASTM D-638	Water Absorption	Physical Properties	0.003%
ASTM D-696	Coefficient of Linear Thermal Expansion	Physical Properties	1.11x10-5 in/in ˚F

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