AMERACORE FR
METAL COMPOSITE MATERIAL

TECHNICAL DATA SHEET

4mm Fire-Rated Metal Composite Material

Engineered for the buildings of tomorrow.

AMERACORE® FR is an NFPA 285-passed fire-rated metal composite material engineered for high-performance architectural cladding, signage, and interior applications. American-made by Alumanate in Houston, Texas.

NFPA 285	FIRE RATING	FLAME SPREAD	SMOKE DEVELOPED	HEAT DEFLECTION	SELF-IGNITION
Passed	Class A	0	5	>545°F	845°F

PRODUCT DESCRIPTION

AMERACORE® FR is a 4mm aluminum composite panel consisting of two 0.020" aluminum facer that are permanently bonded to a mineral-based FR core in a continuous process. The panel has been engineered to deliver exceptional fire performance, dimensional stability, and architectural-grade flatness while meeting the demands of modern code compliance, including NFPA 285 wall assembly performance.

Manufactured in Houston, Texas on continuous 24/7 production lines, AMERACORE® FR combines proven composite panel construction with an FR core formulation that achieves Class A fire performance and category-leading heat deflection resistance — making it suitable for both exterior cladding above 40 feet and demanding interior applications.

APPLICATIONS

Exterior Cladding · Curtain Wall · Column Covers · Canopies & Soffits · Interior Walls · Signage · Fascia · Renovations

KEY BENEFITS

- NFPA 285 wall assembly compliance
- Class A flame spread & smoke developed
- Heat deflection >545°F under load
- Excellent flatness & formability
- Wide range of PVDF finishes
- American-engineered & manufactured

COMPOSITION

Aluminum Skin Alloy	**3105-H14**	
Panel Thickness	**0.157 / 4.0**	in / mm
Skin Thickness (nominal)	**0.020 / 0.5**	in / mm
Core Material	**Fire Rated**	
Panel Weight	**1.51 / 7.37**	lb/ft² / kg/m²

STANDARD SIZES

Standard Widths	**50 | 62**	in
Other Available Widths	**40 | 49.2 | 60**	in
Standard Lengths	**Up to 300**	in

PRODUCT WARRANTY

Bond Integrity	**10 Years**
2-Coat / 3-Coat PVDF Finish	**20 – 40 Years**

FINISHES

AAMA 2605 compliant coil-coated **70% PVDF (Kynar 500)** finishes available in solid, mica, metallic, and specialty colors. Standard and custom colors available. Contact factory for full color palette and current finish warranties.

CODE COMPLIANCE

CERTIFICATIONS

NFPA 285 (wall assembly pass) · ASTM E84 Class A · IBC-compliant for exterior wall assemblies · ISO/IEC 17025 accredited lab testing (ICC-ES, ICC NTA, Intertek)

MADE IN AMERICA

AMERACORE® FR is engineered and manufactured by **Alumanate** at our Houston, Texas facility on two continuous 24/7 production lines. Every panel is produced under strict quality controls with full lot traceability by a privately owned American manufacturer focused on domestic production, reliable supply, and reinvesting in U.S. operations and jobs.

Engineering Properties for **AMERACORE® FR**

All values from third-party ASTM testing

DESCRIPTION	STANDARD TEST METHOD	4MM FR	UNITS
MECHANICAL PROPERTIES			
Ultimate Flexural Stress (Perpendicular)	ASTM D790	18,580	psi
Ultimate Flexural Stress (Parallel)	ASTM D790	18,410	psi
Flexural Modulus (Perpendicular)	ASTM D790	3,822	ksi
Flexural Modulus (Parallel)	ASTM D790	3,580	ksi
Tensile Strength	ASTM D638	6,880	psi
Tensile Yield at 0.2% Offset	ASTM D638	6,890	psi
Elongation at Break	ASTM D638	42.9	%
Elastic Modulus	ASTM D638	1,660	ksi
Punching Shear Strength	ASTM D732	4,400	psi
Punching Shear Maximum Load	ASTM D732	2,208	lbf
THERMAL PROPERTIES			
Heat Deflection Temperature (Parallel)	ASTM D648	**>545 / >285**	°F / °C
Heat Deflection Temperature (Perpendicular)	ASTM D648	**>545 / >285**	°F / °C
Coefficient of Linear Thermal Expansion	ASTM D696	1.37×10^{-5}	in/in°F
PHYSICAL PROPERTIES			
Water Absorption (24-hour immersion)	ASTM C272-A	0.00	%
Water Absorption (48-hour immersion)	ASTM C272-C	0.00	%
FIRE PERFORMANCE			
Surface Burning — Flame Spread Index	ASTM E84	**0**	index
Surface Burning — Smoke Developed Index	ASTM E84	**5**	index
Surface Burning — Classification	ASTM E84	**Class A**	—
Wall Assembly Fire Performance	NFPA 285	**PASSED**	—
Self-Ignition Temperature	ASTM D1929	**845 / 451.7**	°F / °C
Flash Ignition Temperature	ASTM D1929	**837 / 447.5**	°F / °C

QUALITY ASSURANCE

All ASTM test data shown represents average values obtained from independent third-party testing conducted at ICC-ES (Bryan, TX), ICC NTA (Nappanee, IN), and Intertek (Kentwood, MI) — all of which are accredited to ISO/IEC 17025. Test reports available upon request.

ENGINEERING SUPPORT

For project-specific structural calculations, wind load analysis, NFPA 285-compliant wall assembly drawings, or any technical specification support, contact our engineering team. CAD details and AutoCAD specification files are available at **www.ameracore.com**.

SPECIFICATION & ORDERING

AMERACORE® FR is available in **standard and custom finishes**, widths up to 62", and lengths up to 300". Custom colors, fabricated routed-and-returned panels, and project-specific tooling are available through our sales team. Contact **sales@ameracore.com** for current lead times, pricing, and stock availability.