



CF TUFF-CAST

INSULATED METAL WALL PANEL



The Mid-West CF Tuff-Cast is an attractive insulated metal panel with the appearance of finished precast concrete.

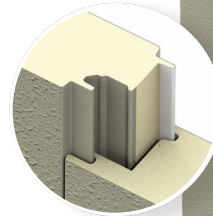
The exterior surface of the panel is a hard aggregated fiber-reinforced polymer coating created with the factory-applied Tuff Cote[®] finish system. Tuff Cote[®] finish offers an extremely durable, impact and abrasion-resistant coating that can withstand severe weather conditions.

Note: Not intended for exterior walls on cold storage buildings.

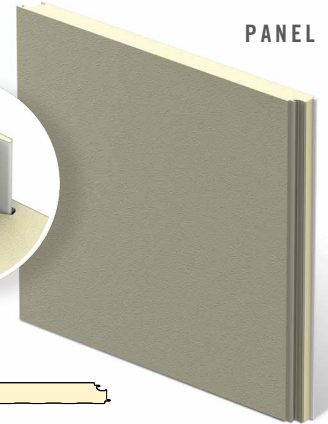
PRODUCT SPECIFICATIONS

WIDTH	36", 42"
THICKNESS	2", 2½", 3", 4", 5", 6"
LENGTH	8'-0" to 40'-0"
EXTERIOR FACE	Stucco-embossed, G-90 galvanized and/or AZ-50 aluminum-zinc coated steel in 24 and 22 Ga. with factory-applied Tuff Cote [®] finish system
INTERIOR FACE	Stucco-embossed, G-90 galvanized and/or AZ-50 aluminum-zinc coated steel in 26, 24 and 22 Ga.
JOINT	Offset double tongue-and-groove with extended metal shelf for positive face fastening
EXTERIOR PROFILE	2", 2½", 3" and 4" are no profile with Tuff Cote [®] finish system; 5" and 6" are Mesa nominal ¼" deep with Tuff Cote [®] finish system
INTERIOR PROFILE	Light Mesa nominal ¼" deep

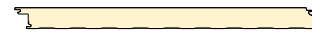
LOCK & GROOVE SYSTEM



PANEL SYSTEM



PANEL PROFILE



CORE Foamed-in-place, Non-CFC & zero ODP polyurethane, FM Approved Class 1 with no height restrictions

THERMAL VALUES K-Factor* @ 75° F (24° C) is 0.14, @ 40° F (4° C) is 0.126

EXTERIOR TEXTURE Tuff Cote[®] finish system—a hard aggregated fiber-reinforced polymer coating

FASTENING Fastener and clip concealed in the side joint

U-FACTORS AND R-VALUES**

U-FACTOR (BTU/h-ft²·°F)

PANEL WIDTH: 42"

	75°
2"	0.0669
2½"	0.0500
3"	0.0400
4"	0.0307
5"	0.0264
6"	0.0224

R-VALUE (h-ft²·°F/BTU)

PANEL WIDTH: 42"

	75°
2"	14.95
2½"	20.00
3"	25.00
4"	32.57
5"	37.88
6"	44.64

*K-Factor calculations: BTU in/ft²·hr. °F

**Based on ASTM C518, ASTM C1363 and thermal modeling, 75° F core mean temp.

DESIGN FEATURES & BENEFITS

- Look of finished precast concrete with the efficiency of an insulated metal panel
- Field-tested and proven Tuff Cote[®] technology
- Durable finish that is highly resistant to impact and abrasion
- 10-year limited exterior finish warranty
- Utilizes concealed clips and eliminates thermal short circuits
- Easy and fast installation, with reduced construction labor costs

TESTING: CF TUFF-CAST INSULATED METAL WALL PANEL

TEST/APPROVAL	TEST METHOD	TEST TITLE	RESULTS
Fire US	ASTM E84	Surface Burning Characteristics of Building Materials	Flame spread <25, smoke developed <450
	ASTM E119	Fire Tests of Building Construction Materials	One hour non-load bearing rating with two layers of Type X Gypsum Vertical or horizontal installation
	FM 4880	Class 1 Fire Rating of Insulated Wall, Ceiling and Roof Panels	Product approved Exterior wall requires FM 4881 approval
	NFPA 259	Test Method for Potential Heat of Building Materials	Potential heat of foam plastic insulation contained in the assembly tested in accordance with NFPA 285
	NFPA 285	Evaluation of Fire Propagation Characteristics of Exterior Non-Load Bearing Wall Assemblies	Panel assembly met the requirements of the standard
	NFPA 286	Fire Tests for Evaluating Contribution of Wall and Ceiling Finish to Roof Fire Growth	Test specimen met the criteria of the IBC Section 803.1.2.1
Fire Canada	CAN/ULC S101	Fire Endurance Tests of Building Construction and Materials	One hour non-load bearing fire rating with two layers of Type X Gypsum
	CAN/ULC S101	Fire Endurance Tests of Building Construction and Materials	Meets 15 minute stay-in-place requirements
	CAN/ULC S102	Surface Burning Characteristics of Building Materials and Assemblies	Meets the National Building Code of Canada requirements
	CAN/ULC S134	Fire Test of Exterior Wall Assemblies	Complies with the fire-spread and heat-flux limitations required by the National Building Code of Canada
	CAN/ULC S138	Fire Growth of Insulated Building Panels in a Full-Scale Room Configuration	Met the criteria of the standard
Structural	ASTM E72	Strength Tests of Panels for Building Construction	See Load Chart
	ASTM E1592	Structural Performance of Metal Roof and Siding Systems by Uniform Static Air Pressure Differences	See Load Chart
	FM 4881	Class 1 Exterior Wall Structural Performance	See FM Wall Load Chart
Thermal Performance	ASTM C518	Steady-State Thermal Transmission Properties by Means of the Heat-Flow Meter Apparatus	K-Factor of 0.126 BTU.in/hr.ft ² .°F at 40° F mean core K-Factor of 0.14 BTU.in/hr.ft ² .°F at 75° F mean core
	ASTM C1363	Thermal Performance of Building Materials and Envelope Assemblies	See Thermal Performance Guide
Air Infiltration	ASTM E283	Rate of Air Leakage Through Curtain Walls Under Specified Pressure Differences	<0.01 cfm/ft ² at 20 psf Vertical or horizontal installation
Water Infiltration	ASTM E331	Water Penetration of Exterior Walls by Uniform Static Air Pressure Differences	No uncontrolled leakage when tested to a static pressure of 20 psf Vertical or horizontal installation
Special Approval	Miami-Dade NOA	Product Approval for City of Miami and Dade County	Product has City of Miami and Dade County Notice of Acceptance
	State of Florida	Product Approval for the State of Florida	Product has State of Florida approval

Descriptions and specifications contained herein were in effect at the time this publication was approved for printing. In a continuing effort to refine and improve products, Mid-West Steel reserves the right to discontinue products at any time or change specifications and/or designs without incurring obligation. To ensure you have the latest information available, please inquire or visit our website at mid-weststeel.com.