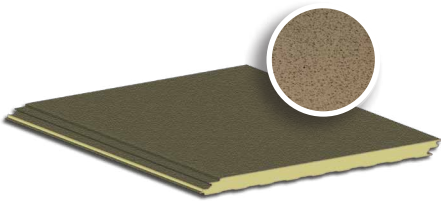
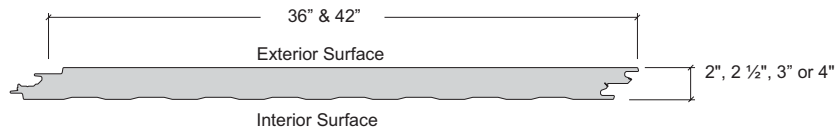




The Tuff-Cast™ panel is designed for exterior applications where an aggregate look is preferred. The exterior skin of the panel is embossed flat and results in an appearance of finished precast concrete. The exterior textured surface of the panel is a factory applied, hard aggregated fiber reinforced polymer coating called Tuff Cote®. Tuff Cote® finish offers an extremely durable, impact and abrasion resistant coating that withstands severe weather conditions. The interior skin has the embossed Light Mesa profile.



Features and Benefits:

- Offers an aggregate finish with the thermal efficiency of an insulated metal panel.
- Utilizes concealed clips, eliminating thermal short circuits.
- A durable finish that is highly resistant to impact and abrasion.
- A 10-year limited warranty.

Product Specifications:

Applications: Wall (Vertical or Horizontal)

Coverage Widths: 36", 42"

Thicknesses: 2", 2½", 3", 4"

Lengths: Recommended maximum is 32'

Attachment: Concealed fastening system

Insulation Material: Non-CFC foamed-in-place polyurethane foam cured to achieve a minimum density of 2.2 pounds

Accessories: Fasteners, sealants, standard and custom trim

Exterior Gauge: 24 (standard); 22 (optional)

Interior Gauge: 26 (standard); 24, 22 (optional)

Exterior Finishes: Tuff-Cast™

Interior Finishes: Embossed, Light Mesa profile

Exterior Coatings: Applied Finishes

U-Factors and R-Values*:

U-Factor (BTU/h-ft²·°F)

R-Value (h-ft²·°F/BTU)

PANEL WIDTH: 42"

PANEL WIDTH: 42"

75°		75°	
2"	0.0669	2"	14.95
2½"	0.0500	2½"	20.00
3"	0.0400	3"	25.00
4"	0.0307	4"	32.57
5"	0.0264	5"	37.88
6"	0.0224	6"	44.64

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

CATEGORY	CHARACTERISTIC	TEST METHOD	PURPOSE	RESULT
Environmental	Thermal Transmission	ASTM C518	Measure the heat transmission coefficient per unit thickness (k-factor)	0.140 BTU-in/hr-ft ² -° F (7.14/inch) at 75° F mean temperature 0.126 BTU-in/hr-ft ² -° F (7.94/inch) at 40° F mean temperature 0.118 BTU-in/hr-ft ² -° F (8.47/inch) at 20° F mean temperature
		ASTM C1363	Measures the resistance to heat flow (or R-Value) of a construction assembly in a guarded hot box	Varies up to R-8.5/inch of panel thickness at 40° F mean temperature (See Appendix A)
	Air Leakage Through Wall Panel Joints	ASTM E283	Determines the air leakage characteristics of metal wall panels under specified air pressure differences at ambient conditions	0.01 cfm/ft ² at 20 psf static pressure
	Water Penetration Through Wall Panel Joints	ASTM E331	Determines the resistance to water penetration of metal wall panels under uniform static air pressure difference	No uncontrolled water penetration through the panel joints at a static pressure of 20 psf
Foam Properties	Foam Density	ASTM D1622	Determines the apparent density of rigid cellular plastics	2.3 pcf
	Foam Compressive Strength	ASTM D1621	Determines the behavior of cellular materials under compressive load	15 psi through-thickness 22 psi other directions
	Foam Tensile Strength	ASTM D1623	Measures the tensile strength of the foam from a cored sample	30 psi through-thickness 33 psi lowest any other direction
	Foam Shear Strength	ASTM C273	Measures the shear strength of the foam from a cored sample	16 psi lowest in any direction
Fire Resistance	Surface Burning Characteristics	ASTM E84	Provides comparative measurements of surface flame spread and smoke density measurements relative to that of select grade red oak and fiber-cement board surfaces under specific fire exposure conditions	Flame Spread index of 20, Smoke Developed index of 350
	Room Fire Performance	FM 4880	Evaluates insulated roof and wall panels, interior finishes or coatings, and exterior wall systems for their performance in regard to fire	Class 1 Rating of wall and roof panels for use in unlimited height structures
		NFPA 286	Fire tests for the flammability characteristics of wall and ceiling interior finishes	The Panels meet the criteria of the IBC Section 803.1.2.1
		CAN/ULC S101	Standard method of fire endurance tests of building construction and materials	The Panels provide 15-minute remain-in-place fire resistance rating
		CAN/ULC S102	Standard method of test for surface burning characteristics of building material and assemblies	Flame Spread index of 0 Smoke Developed Index of 45 Fuel Contributing Value of 0
		CAN/ULC S134	Standard method of fire test of exterior wall assemblies	The Panels meet the criteria published in the standard
		CAN/ULC S138	Standard method of test for fire growth of insulated building panels in a full-scale room configuration	The Panels meet the criteria published in the standard
Wall Fire Performance	NFPA 285	Evaluation of fire propagation characteristics of exterior non-load bearing wall assemblies in regard to fire	Panels meet the requirement of the standard	
Structural	Uplift Resistance	ASTM E72 ASTM E330	Provides a standard procedure to evaluate or confirm structural performance under uniform static air pressure difference	See Load Chart Section
	Positive Load Resistance	ASTM E72	Tests the behavior of segments of wall construction under conditions representative of those encountered in service	See Load Chart Section
Wall Listings	Wall Performance – FM Global® (See Note 1 below)	FM 4881	Sets performance standards for panel walls including wind load resistance and hail resistance Requires a Class 1 rating by FM Global Standard 4880 as a prerequisite	See FM Global Approval Guide for Building Products complete listings

Notes:

1. Wall panels with textured coatings are not approved for the FM 4881 test method.

