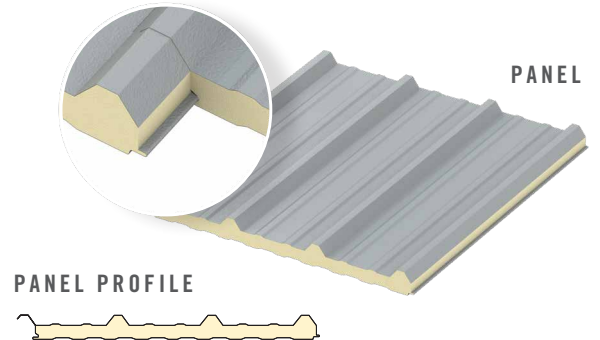


# LS-36

## INSULATED METAL ROOF & WALL PANEL

The LS-36 insulated metal panel provides versatility with design options while also attaining unmatched insulation values. The overlapping, through-fastened joint allows for quick installation in roof or wall applications, which results in reduced labor costs and earlier business starts. Additionally, the insulation within the panel aids in energy cost savings.

### LOCK & GROOVE SYSTEM



### PRODUCT SPECIFICATIONS

<b>WIDTH</b>	36"
<b>THICKNESS</b>	1½", 2", 2½", 3", 4", 5", 6"
<b>LENGTH</b>	8'-0" to 50'-0"
<b>EXTERIOR FACE</b>	Stucco-embossed, G-90 galvanized and/or AZ-50 aluminum-zinc coated steel in 26, 24 and 22 Ga.
<b>INTERIOR FACE</b>	Stucco-embossed, G-90 galvanized and/or AZ-50 aluminum-zinc coated steel in 26, 24 and 22 Ga.
<b>JOINT</b>	Overlapping with a single tongue-and-groove
<b>EXTERIOR PROFILE</b>	1¼" high major ribs at 12" on center with Mesas in between ribs at 4" on center
<b>INTERIOR PROFILE</b>	Mesa profile, nominal ⅛" deep
<b>FASTENING</b>	Exposed through fasteners
<b>UPLIFT PERFORMANCE</b>	FM Approvals Standard 4471

### ROOF U-FACTORS AND R-VALUES \*

U-FACTOR (BTU/h-ft <sup>2</sup> ·°F)		R-VALUE (h-ft <sup>2</sup> ·°F/BTU)	
PANEL WIDTH: 36"		PANEL WIDTH: 36"	
	75°		75°
1½"	0.0788	1½"	12.69
2"	0.0603	2"	16.58
2½"	0.0492	2½"	20.33
3"	0.0416	3"	24.04
4"	0.0327	4"	30.58
5"	0.0267	5"	37.45
6"	0.0223	6"	44.84

### WALL U-FACTORS AND R-VALUES \*

U-FACTOR (BTU/h-ft <sup>2</sup> ·°F)		R-VALUE (h-ft <sup>2</sup> ·°F/BTU)	
PANEL WIDTH: 36"		PANEL WIDTH: 36"	
	75°		75°
1½"	0.0783	1½"	12.77
2"	0.0602	2"	16.61
2½"	0.0491	2½"	20.37
3"	0.0414	3"	24.15
4"	0.0326	4"	30.67
5"	0.0268	5"	37.31
6"	0.0227	6"	44.05

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

### DESIGN FEATURES & BENEFITS

- Wall and roof applications
- Through-fastened
- Easy and fast installation, with reduced construction labor costs
- FM 4471 Approved Class 1 rating

# TESTING: LS-36 INSULATED METAL ROOF & WALL PANEL

TEST/APPROVAL	TEST METHOD	TEST TITLE	RESULTS
<b>Fire US</b>	ASTM E84	Surface Burning Characteristics of Building Materials	Flame spread <25, smoke developed <450
	ASTM E119	Fire Tests of Building Construction Materials	Horizontal or vertical panel installation. One hour non-load bearing rating with two layers of Type X Gypsum
	ASTM E108	Standard Test Methods for Fire Tests of Roof Coverings	Passed Class A
	FM 4880	Class 1 Fire Rating of Insulated Wall, Ceiling and Roof Panels	Product approved Exterior roof requires FM 4471 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
<b>Fire Canada</b>	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 S107	Methods of Fire Tests of Roof Coverings	Passed Class A
	CAN/ULC S126	Fire Spread Under Roof-Deck Assemblies	Met the criteria of the standard
<b>Structural</b>	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 4471	Class 1 Exterior Roof Structural Performance	Class 1-105 windstorm classification Minimum 16-gauge members at maximum 5' on center
<b>Thermal Performance</b>	ASTM C518	Steady-State Thermal Transmission Properties by Means of the Heat-Flow Meter Apparatus	K-Factor of 0.126 BTU.in/hr.ft <sup>2</sup> .°F at 40° F mean core K-Factor of 0.14 BTU.in/hr.ft <sup>2</sup> .°F at 75° F mean core
	ASTM C1363	Thermal Performance of Building Materials and Envelope Assemblies	See Thermal Performance Guide
<b>Air Infiltration</b>	ASTM E1680	Rate of Air Leakage Through Exterior Metal Roof Panel Systems	<0.0014 cfm/ft <sup>2</sup> at 12 psf
<b>Water Infiltration</b>	ASTM E1646	Water Penetration of Exterior Metal Roof Panel Systems by Static Air Pressure Differences	No uncontrolled leakage when tested to a static pressure of 20 psf

Descriptions and specifications contained herein were in effect at the time this publication was approved for printing. Application details are for illustration purposes only and may not be appropriate for all environmental conditions, building designs or panel profiles. Projects should be designed to conform to applicable building codes, regulations and accepted industry practices. If there is a conflict between this document and project erection drawings, the erection drawings will take precedence.