

INSULATED PANEL TECHNOLOGIES





Panel Use

Coverage Width

Thickness

Length

Exterior Gauge

Interior Gauge

Exterior Substrate

Interior Substrate

Exterior Finish

Interior Finish

Exterior Texture

Interior Texture

interior resture

Joint

Core

R-Value

Partition Wall, Liner Wall, Ceiling

42-inch

2, 2.5, 3, 4, 5, 6-inch

8'-0" to 40'-0"

26, 24, 22

26

Galvalume®, G90

Galvalume®, G90

Polyester, Siliconized Polyester, Plastisol (PVC)

Polyester, Siliconized Polyester, Plastisol (PVC)

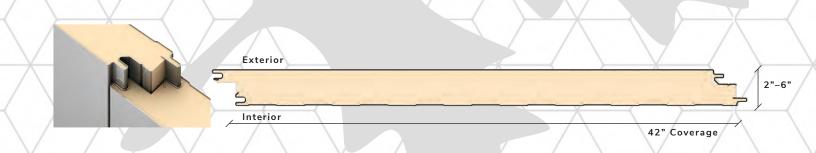
Embossed, Smooth

Embossed, Smooth

Green-Lock, offset double tongue-and-groove

Continuously poured-in-place polyisocyanurate insulating foam

R-8 per inch of thickness (nominal)



TESTING: CLEANLINE INSULATED METAL PANEL

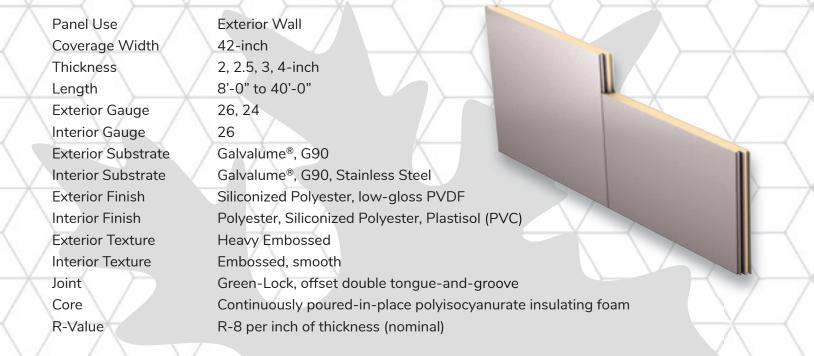
TYPE TEST PROTOCOL		DESCRIPTION	RESULTS		
ENVIRONMENTAL PERFORMANCE	ASTM C518	Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus	K-Factor 0.139 BTU-in/hr-ft²-F° at 75° mean K-Factor 0.129 BTU-in/hr-ft²-F° at 35° mean		
	ASTM E283	Rate of Air Leakage Through Exterior Windows, Curtain Walls and Doors Under Specified Pressure Differences Across the Specimen	0.0011-cfm/sf at 20-psf		
	ASTM E331	Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Uniform Static Air Pressure Difference	Zero penetration at 20-psf		
FOAM CORE	ASTM C273	Shear Properties of Sandwich Core Materials	Shear Strength = 16-psi		
CHARACTERISTICS	ASTM D1621	Compressive Properties of Rigid Cellular Plastics	Compressive Strength — 18-psi		
	ASTM D1622	Apparent Density of Rigid Cellular Plastics	Apparent Density — 2.25-pcf		
	ASTM D1623	Tensile and Tensile Adhesion Properties of Rigid Cellular Plastics	Tensile Strength — 21-psi		
	ASTM D6226	Open Cell Content of Rigid Cellular Plastics	Open Cell Content ≥ 90% closed cells		
IRE ESISTANCE	ASTM E84	Surface Burning Characteristics of Building Materials	Flame Spread < 25, Smoke Developed < 450		
RESISTANCE	NFPA 285	Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Non-Load-Bearing Wall Assemblies Containing Combustible Components	Passed — see technical bulletin ATB-0007		
	FM 4880	Factory Mutual Approval Standard for Class 1 Fire Rating of Insulated Wall or Wall and Roof/Ceiling Panels, Interior Finish Materials or Coatings and Exterior Wall Systems	Class 1 Fire Rated — see technical bulletin ATB-0005		
IMPACT RESISTANCE	FM 4881	Factory Mutual Approval Standard for Class 1 Exterior Wall Systems			
	TAS 201	Florida Building Code Impact Test Procedure	Miami Dade County NOA No. 15-0204.02		
ENGINEERING PROPERTIES	ASTM E1592	Structural Performance of Sheet Metal Roof and Siding Systems by Uniform Static Air Pressure Difference	See Load Tables		
	ASTM E72	Strength Tests of Panels for Building Construction	See Load Tables		
	FM 4881	Factory Mutual Approval Standard for Class 1 Exterior Wall Systems	Class 1 Approved — see technical bulletins ETB-0008 and ETB-0013		
APPROVALS	Miami-Dade County	Miami-Dade County Product Control Section — Notice of Acceptance	Miami Dade County NOA No. 15-0204.02		
	State of Florida	Florida Product Approval	#16327-R1		
	TX Dept. of Insurance	Product Evaluation	Evaluation ID: EC-103		
BOND STRENGTH	Fatigue Endurance	2,000,000 Alternating Cycles of L/180 Deflection	No evidence of facer or liner delamination, fracture of foam core or permanent set		
	Freeze/Heat Cycle	Twenty-One (21) Eight-hour Temperature Cycles (–20° F to 180° F)	No evidence of delamination, blistering or permanent set		
	Humidity Endurance	1,200 Hours of 93% Humidity at a Temperature of 158° F	No evidence of delamination, blistering or interface corrosion		
	Autoclave	Exposure to 218° F and a pressure of 2-psig for 2½ hours	No evidence of facer or liner delamination		

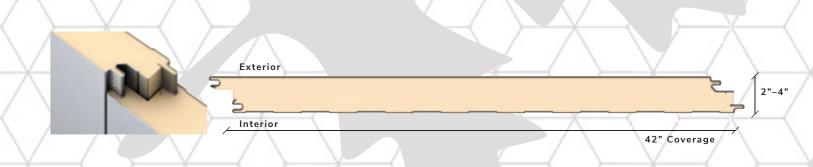












TESTING: IMPRESSION INSULATED METAL PANEL

TYPE TEST PROTOCOL		DESCRIPTION	RESULTS	
ENVIRONMENTAL PERFORMANCE	ASTM C518	Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus	K-Factor 0.139 BTU-in/hr-ft²-F° at 75° mean K-Factor 0.129 BTU-in/hr-ft²-F° at 35° mean	
	ASTM E283	Rate of Air Leakage Through Exterior Windows, Curtain Walls and Doors Under Specified Pressure Differences Across the Specimen	0.0011-cfm/sf at 20-psf	
	ASTM E331	Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Uniform Static Air Pressure Difference	Zero penetration at 20-psf	
FOAM CORE	ASTM C273	Shear Properties of Sandwich Core Materials	Shear Strength = 16-psi	
CHARACTERISTICS	ASTM D1621	Compressive Properties of Rigid Cellular Plastics	Compressive Strength — 18-psi	
	ASTM D1622	Apparent Density of Rigid Cellular Plastics	Apparent Density — 2.25-pcf	
	ASTM D1623	Tensile and Tensile Adhesion Properties of Rigid Cellular Plastics	Tensile Strength — 21-psi	
	ASTM D6226	Open Cell Content of Rigid Cellular Plastics	Open Cell Content ≥ 90% closed cells	
TIRE	ASTM E84	Surface Burning Characteristics of Building Materials	Flame Spread < 25, Smoke Developed < 450	
RESISTANCE	NFPA 285	Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Non-Load-Bearing Wall Assemblies Containing Combustible Components	Passed — see technical bulletin ATB-0007	
	FM 4880	Factory Mutual Approval Standard for Class 1 Fire Rating of Insulated Wall or Wall and Roof/Ceiling Panels, Interior Finish Materials or Coatings and Exterior Wall Systems	Class 1 Fire Rated — see technical bulletin ATB-0005	
IMPACT RESISTANCE	FM 4881	Factory Mutual Approval Standard for Class 1 Exterior Wall Systems		
	TAS 201	Florida Building Code Impact Test Procedure	Miami Dade County NOA No. 15-0204.02	
ENGINEERING PROPERTIES	ASTM E1592	Structural Performance of Sheet Metal Roof and Siding Systems by Uniform Static Air Pressure Difference	See Load Tables	
	ASTM E72	Strength Tests of Panels for Building Construction	See Load Tables	
	FM 4881	Factory Mutual Approval Standard for Class 1 Exterior Wall Systems	Class 1 Approved — see technical bulletins ETB-0008 and ETB-0013	
APPROVALS	Miami-Dade County	Miami-Dade County Product Control Section — Notice of Acceptance	Miami Dade County NOA No. 15-0204.02	
	State of Florida	Florida Product Approval	#16327-R1	
	TX Dept. of Insurance	Product Evaluation	Evaluation ID: EC-103	
BOND STRENGTH	Fatigue Endurance	2,000,000 Alternating Cycles of L/180 Deflection	No evidence of facer or liner delamination, fracture of foam core or permanent set	
	Freeze/Heat Cycle	Twenty-One (21) Eight-hour Temperature Cycles (–20° F to 180° F)	No evidence of delamination, blistering or permanent set	
	Humidity Endurance	1,200 Hours of 93% Humidity at a Temperature of 158° F	No evidence of delamination, blistering or interface corrosion	
	Autoclave	Exposure to 218° F and a pressure of 2-psig for 2½ hours	No evidence of facer or liner delamination	















Panel Use Partition Wall, Liner Wall, Tee Supported Ceiling

Coverage Width 45-inch
Thickness 3, 4, 5, 6-inch
Length 8'-0" to 53'-0"

Exterior Gauge 26 Interior Gauge 26

Exterior Substrate Galvalume®
Interior Substrate Galvalume®

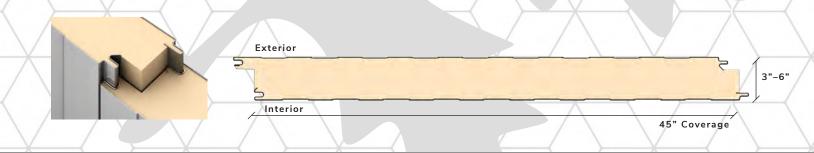
Exterior Finish Polyester, Siliconized Polyester, Plastisol (PVC)
Interior Finish Polyester, Siliconized Polyester, Plastisol (PVC)

Exterior Texture Embossed, Smooth Interior Texture Embossed, Smooth

Joint Green-Lock, offset double tongue-and-groove

Core Continuously poured-in-place polyisocyanurate insulating foam

R-Value R-8 per inch of thickness (nominal)



TESTING: MAXLINE INSULATED METAL PANEL

TYPE	TEST PROTOCOL	DESCRIPTION	RESULTS
ENVIRONMENTAL PERFORMANCE	ASTM C518	Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus	K-Factor 0.139 BTU-in/hr-ft²-F° at 75° mean K-Factor 0.129 BTU-in/hr-ft²-F° at 35° mean
	ASTM E283	Rate of Air Leakage Through Exterior Windows, Curtain Walls and Doors Under Specified Pressure Differences Across the Specimen	0.0011-cfm/sf at 20-psf
	ASTM E331	Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Uniform Static Air Pressure Difference	Zero penetration at 20-psf
FOAM CORE	ASTM C273	Shear Properties of Sandwich Core Materials	Shear Strength = 16-psi
CHARACTERISTICS	ASTM D1621	Compressive Properties of Rigid Cellular Plastics	Compressive Strength — 18-psi
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	ASTM D6226	Open Cell Content of Rigid Cellular Plastics	Open Cell Content ≥ 90% closed cells
FIRE	ASTM E84	Surface Burning Characteristics of Building Materials	Flame Spread < 25, Smoke Developed < 450
RESISTANCE	FM 4880	Factory Mutual Approval Standard for Class 1 Fire Rating of Insulated Wall or Wall and Roof/Ceiling Panels, Interior Finish Materials or Coatings and Exterior Wall Systems	Class 1 Fire Rated — see technical bulletin ATB-0005
IMPACT RESISTANCE	FM 4881	Factory Mutual Approval Standard for Class 1 Exterior Wall Systems	
	TAS 201	Florida Building Code Impact Test Procedure	Miami Dade County NOA No. 15-0204.02
ENGINEERING PROPERTIES	ASTM E72	Strength Tests of Panels for Building Construction	See Load Tables
BOND STRENGTH	Fatigue Endurance	2,000,000 Alternating Cycles of L/180 Deflection	No evidence of facer or liner delamination, fracture of foam core or permanent set
	Freeze/Heat Cycle	Twenty-One (21) Eight-hour Temperature Cycles (–20° F to 180° F)	No evidence of delamination, blistering or permanent set
	Humidity Endurance	1,200 Hours of 93% Humidity at a Temperature of 158° F	No evidence of delamination, blistering or interface corrosion
	Autoclave	Exposure to 218° F and a pressure of 2-psig for 2½ hours	No evidence of facer or liner delamination







Panel Use Exterior Wall, Partition Wall,

Liner Wall, Ceiling

Coverage Width 42-inch

Thickness 2, 2.5, 3, 4, 5, 6-inch

Length 8'-0" to 53'-0"

Exterior Gauge 26, 24, 22

Interior Gauge 26

Exterior Substrate Galvalume®, G90, Stainless Steel Interior Substrate Galvalume®, G90, Stainless Steel

Exterior Finish Polyester, Siliconized Polyester, low-gloss PVDF,

Plastisol (PVC)

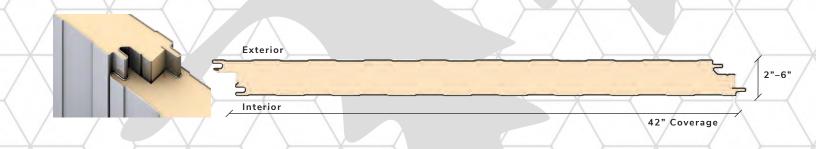
Interior Finish Polyester, Siliconized Polyester, Plastisol (PVC)

Exterior Texture Embossed, Smooth Interior Texture Embossed, Smooth

Joint Green-Lock, offset double tongue-and-groove

Core Continuously poured-in-place polyisocyanurate insulating foam

R-Value R-8 per inch of thickness (nominal)



TESTING: MESALINE INSULATED METAL PANEL

TYPE TEST PROTOCOL		DESCRIPTION	RESULTS	
ENVIRONMENTAL PERFORMANCE	ASTM C518	Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus	K-Factor 0.139 BTU-in/hr-ft²-F° at 75° mean K-Factor 0.129 BTU-in/hr-ft²-F° at 35° mean	
	ASTM E283	Rate of Air Leakage Through Exterior Windows, Curtain Walls and Doors Under Specified Pressure Differences Across the Specimen	0.0011-cfm/sf at 20-psf	
	ASTM E331	Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Uniform Static Air Pressure Difference	Zero penetration at 20-psf	
FOAM CORE	ASTM C273	Shear Properties of Sandwich Core Materials	Shear Strength = 16-psi	
CHARACTERISTICS	ASTM D1621	Compressive Properties of Rigid Cellular Plastics	Compressive Strength — 18-psi	
	ASTM D1622	Apparent Density of Rigid Cellular Plastics	Apparent Density — 2.25-pcf	
	ASTM D1623	Tensile and Tensile Adhesion Properties of Rigid Cellular Plastics	Tensile Strength — 21-psi	
	ASTM D6226	Open Cell Content of Rigid Cellular Plastics	Open Cell Content ≥ 90% closed cells	
TIRE	ASTM E84	Surface Burning Characteristics of Building Materials	Flame Spread < 25, Smoke Developed < 450	
RESISTANCE	NFPA 285	Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Non-Load-Bearing Wall Assemblies Containing Combustible Components	Passed — see technical bulletin ATB-0007	
	FM 4880	Factory Mutual Approval Standard for Class 1 Fire Rating of Insulated Wall or Wall and Roof/Ceiling Panels, Interior Finish Materials or Coatings and Exterior Wall Systems	Class 1 Fire Rated — see technical bulletin ATB-0005	
IMPACT RESISTANCE	FM 4881	Factory Mutual Approval Standard for Class 1 Exterior Wall Systems		
	TAS 201	Florida Building Code Impact Test Procedure	Miami Dade County NOA No. 15-0204.02	
ENGINEERING PROPERTIES	ASTM E1592	Structural Performance of Sheet Metal Roof and Siding Systems by Uniform Static Air Pressure Difference	See Load Tables	
	ASTM E72	Strength Tests of Panels for Building Construction	See Load Tables	
	FM 4881	Factory Mutual Approval Standard for Class 1 Exterior Wall Systems	Class 1 Approved — see technical bulletins ETB-0008 and ETB-0013	
APPROVALS	Miami-Dade County	Miami-Dade County Product Control Section — Notice of Acceptance	Miami Dade County NOA No. 15-0204.02	
	State of Florida	Florida Product Approval	#16327-R1	
	TX Dept. of Insurance	Product Evaluation	Evaluation ID: EC-103	
BOND STRENGTH	Fatigue Endurance	2,000,000 Alternating Cycles of L/180 Deflection	No evidence of facer or liner delamination, fracture of foam core or permanent set	
	Freeze/Heat Cycle	Twenty-One (21) Eight-hour Temperature Cycles (–20° F to 180° F)	No evidence of delamination, blistering or permanent set	
	Humidity Endurance	1,200 Hours of 93% Humidity at a Temperature of 158° F	No evidence of delamination, blistering or interface corrosion	
	Autoclave	Exposure to 218° F and a pressure of 2-psig for 2½ hours	No evidence of facer or liner delamination	













Panel Use Exterior Wall

Coverage Width 42-inch

Thickness 2, 2.5, 3, 4, 5, 6-inch

Length 8'-0" to 53'-0"

Exterior Gauge 26, 24

Interior Gauge 26

Exterior Substrate Galvalume® 690

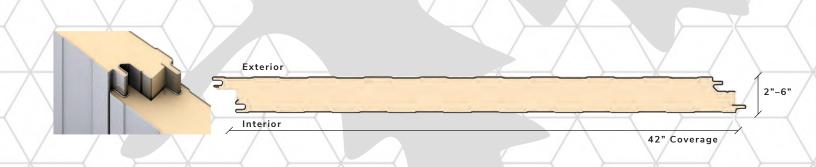
Exterior Substrate Galvalume®, G90
Interior Substrate Galvalume®, G90, Stainless Steel
Exterior Finish Siliconized Polyester, low-gloss PVDF
Interior Finish Polyester, Siliconized Polyester, Plastisol (PVC)

Exterior Texture Heavy Embossed
Interior Texture Embossed, Smooth

Joint Green-Lock, offset double tongue-and-groove

Core Continuously poured-in-place polyisocyanurate insulating foam

R-Value R-8 per inch of thickness (nominal)



TESTING: MESALINE HSE INSULATED METAL PANEL

TYPE TEST PROTOCOL		DESCRIPTION	RESULTS	
ENVIRONMENTAL PERFORMANCE	ASTM C518	Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus	K-Factor 0.139 BTU-in/hr-ft²-F° at 75° mean K-Factor 0.129 BTU-in/hr-ft²-F° at 35° mean	
	ASTM E283	Rate of Air Leakage Through Exterior Windows, Curtain Walls and Doors Under Specified Pressure Differences Across the Specimen	0.0011-cfm/sf at 20-psf	
	ASTM E331	Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Uniform Static Air Pressure Difference	Zero penetration at 20-psf	
FOAM CORE	ASTM C273	Shear Properties of Sandwich Core Materials	Shear Strength = 16-psi	
CHARACTERISTICS	ASTM D1621	Compressive Properties of Rigid Cellular Plastics	Compressive Strength — 18-psi	
	ASTM D1622	Apparent Density of Rigid Cellular Plastics	Apparent Density — 2.25-pcf	
	ASTM D1623	Tensile and Tensile Adhesion Properties of Rigid Cellular Plastics	Tensile Strength — 21-psi	
	ASTM D6226	Open Cell Content of Rigid Cellular Plastics	Open Cell Content ≥ 90% closed cells	
TIRE	ASTM E84	Surface Burning Characteristics of Building Materials	Flame Spread < 25, Smoke Developed < 450	
RESISTANCE	NFPA 285	Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Non-Load-Bearing Wall Assemblies Containing Combustible Components	Passed — see technical bulletin ATB-0007	
	FM 4880	Factory Mutual Approval Standard for Class 1 Fire Rating of Insulated Wall or Wall and Roof/Ceiling Panels, Interior Finish Materials or Coatings and Exterior Wall Systems	Class 1 Fire Rated — see technical bulletin ATB-0005	
IMPACT RESISTANCE	FM 4881	Factory Mutual Approval Standard for Class 1 Exterior Wall Systems		
	TAS 201	Florida Building Code Impact Test Procedure	Miami Dade County NOA No. 15-0204.02	
ENGINEERING PROPERTIES	ASTM E1592	Structural Performance of Sheet Metal Roof and Siding Systems by Uniform Static Air Pressure Difference	See Load Tables	
	ASTM E72	Strength Tests of Panels for Building Construction	See Load Tables	
	FM 4881	Factory Mutual Approval Standard for Class 1 Exterior Wall Systems	Class 1 Approved — see technical bulletins ETB-0008 and ETB-0013	
APPROVALS	Miami-Dade County	Miami-Dade County Product Control Section — Notice of Acceptance	Miami Dade County NOA No. 15-0204.02	
	State of Florida	Florida Product Approval	#16327-R1	
	TX Dept. of Insurance	Product Evaluation	Evaluation ID: EC-103	
BOND STRENGTH	Fatigue Endurance	2,000,000 Alternating Cycles of L/180 Deflection	No evidence of facer or liner delamination, fracture of foam core or permanent set	
	Freeze/Heat Cycle	Twenty-One (21) Eight-hour Temperature Cycles (–20° F to 180° F)	No evidence of delamination, blistering or permanent set	
	Humidity Endurance	1,200 Hours of 93% Humidity at a Temperature of 158° F	No evidence of delamination, blistering or interface corrosion	
	Autoclave	Exposure to 218° F and a pressure of 2-psig for 2½ hours	No evidence of facer or liner delamination	



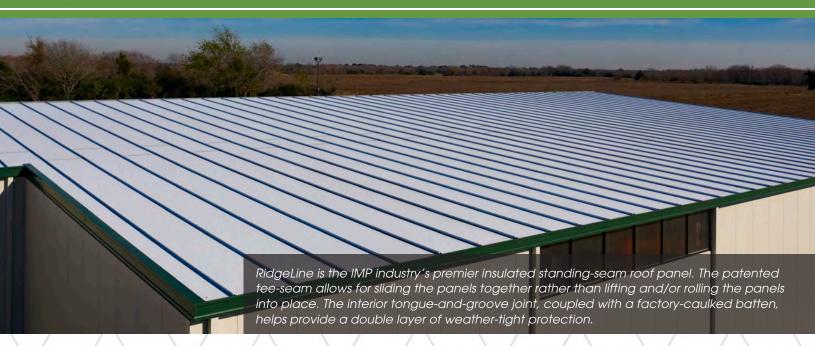












Panel Use

Coverage Width

Thickness

Length

Exterior Gauge

Interior Gauge

Exterior Substrate

Interior Substrate

Exterior Finish

Interior Finish

Exterior Texture

Interior Texture

Exterior Joint

Interior Joint

Core

R-Value

Minimum Slope

U.S. Patent

Exterior Standing-Seam Roof

42-inch

2.5, 3, 4, 5, 6-inch

12'-0" to 53'-0"

26, 24, 22

26

Galvalume[®], G90

Galvalume®, G90, Stainless Steel

Siliconized Polyester, standard gloss PVDF

Polyester, Siliconized Polyester, Plastisol (PVC)

Smooth

Embossed, Smooth

2"-tall, tee-shaped vertical rib with mechanically seamed batten

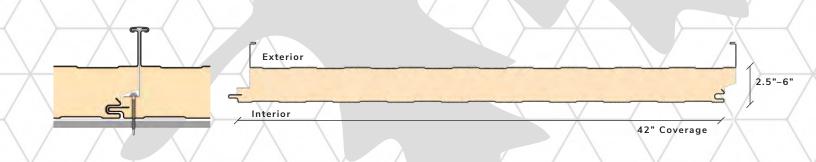
Green-Lock, offset tongue-and-groove

Continuously poured-in-place polyisocyanurate insulating foam

R-8 per inch of thickness (nominal)

1/2:12

9,206,606 B2



TESTING: RIDGELINE INSULATED METAL PANEL

TYPE	TEST PROTOCOL	DESCRIPTION	RESULTS	
ENVIRONMENTAL PERFORMANCE	ASTM C518	Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus	K-Factor 0.139 BTU-in/hr-ft²-F° at 75° mean K-Factor 0.129 BTU-in/hr-ft²-F° at 35° mean	
	ASTM E283	Rate of Air Leakage Through Exterior Windows, Curtain Walls and Doors Under Specified Pressure Differences Across the Specimen	0.0011-cfm/sf at 20-psf	
	ASTM E331	Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Uniform Static Air Pressure Difference	Zero penetration at 20-psf	
FOAM CORE	ASTM C273	Shear Properties of Sandwich Core Materials	Shear Strength = 16-psi	
CHARACTERISTICS	ASTM D1621	Compressive Properties of Rigid Cellular Plastics	Compressive Strength — 18-psi	
	ASTM D1622	Apparent Density of Rigid Cellular Plastics	Apparent Density — 2.25-pcf	
	ASTM D1623	Tensile and Tensile Adhesion Properties of Rigid Cellular Plastics	Tensile Strength — 21-psi	
	ASTM D6226	Open Cell Content of Rigid Cellular Plastics	Open Cell Content ≥ 90% closed cells	
FIRE RESISTANCE	ASTM E84	Surface Burning Characteristics of Building Materials	Flame Spread < 25, Smoke Developed < 450	
RESIS IANCE	FM 4880	Factory Mutual Approval Standard for Class 1 Fire Rating of Insulated Wall or Wall and Roof/Ceiling Panels, Interior Finish Materials or Coatings and Exterior Wall Systems	Class 1 Fire Rated — see technical bulletin ATB-0005	
IMPACT	FM 4771	Factory Mutual Approval Standard for Class 1 Panel Roofs		
RESISTANCE	TAS 201	Florida Building Code Impact Test Procedure	Miami Dade County NOA No. 17-0619.08	
ENGINEERING PROPERTIES	ASTM E1592	Structural Performance of Sheet Metal Roof and Siding Systems by Uniform Static Air Pressure Difference	See Load Tables	
	ASTM E72	Strength Tests of Panels for Building Construction	See Load Tables	
	FM 4471	Factory Mutual Approval Standard for Class 1 Panel Roofs	Class 1 Approved — see technical bulletin ETB-0015	
APPROVALS	Miami-Dade County	Miami-Dade County Product Control Section — Notice of Acceptance	Miami Dade County NOA No. 17-0619.08	
	State of Florida	Florida Product Approval	FL21349	
	Underwriters Laboratories	Roof Deck Construction — Class 90	TGKX.698	
BOND STRENGTH	Fatigue Endurance	2,000,000 Alternating Cycles of L/180 Deflection	No evidence of facer or liner delamination, fracture of foam core or permanent set	
	Freeze/Heat Cycle	Twenty-One (21) Eight-hour Temperature Cycles (–20° F to 180° F)	No evidence of delamination, blistering or permanent set	
	Humidity Endurance	1,200 Hours of 93% Humidity at a Temperature of 158° F	No evidence of delamination, blistering or interface corrosion	
	Autoclave	Exposure to 218° F and a pressure of 2-psig for 2½ hours	No evidence of facer or liner delamination	



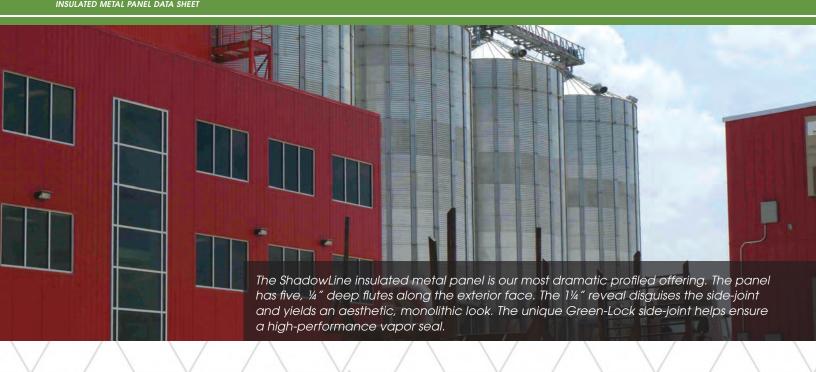












Panel Use
Coverage Width
Thickness

Length

Exterior Gauge

Interior Gauge

Exterior Substrate

Interior Substrate

Exterior Finish

Interior Finish

Exterior Texture Interior Texture

Joint

Core R-Value Exterior Wall

42-inch

2, 2.5, 3, 4, 5, 6-inch

8'-0" to 53'-0"

26, 24, 22

26

Galvalume®, G90

Galvalume®, G90, Stainless Steel

Siliconized Polyester, low-gloss PVDF

Polyester, Siliconized Polyester, Plastisol (PVC)

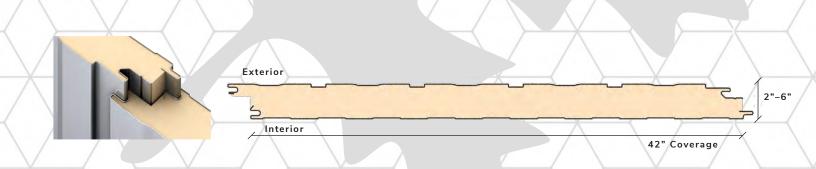
Embossed, Smooth

Embossed, Smooth

Green-Lock, offset double tongue-and-groove

Continuously poured-in-place polyisocyanurate insulating foam

R-8 per inch of thickness (nominal)



TESTING: SHADOWLINE INSULATED METAL PANEL

TYPE TEST PROTOCOL		DESCRIPTION	RESULTS	
ENVIRONMENTAL PERFORMANCE	ASTM C518	Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus	K-Factor 0.139 BTU-in/hr-ft²-F° at 75° mean K-Factor 0.129 BTU-in/hr-ft²-F° at 35° mean	
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FOAM CORE	ASTM C273	Shear Properties of Sandwich Core Materials	Shear Strength = 16-psi	
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	ASTM D6226	Open Cell Content of Rigid Cellular Plastics	Open Cell Content ≥ 90% closed cells	
TIRE	ASTM E84	Surface Burning Characteristics of Building Materials	Flame Spread < 25, Smoke Developed < 450	
RESISTANCE	NFPA 285	Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Non-Load-Bearing Wall Assemblies Containing Combustible Components	Passed — see technical bulletin ATB-0007	
	FM 4880	Factory Mutual Approval Standard for Class 1 Fire Rating of Insulated Wall or Wall and Roof/Ceiling Panels, Interior Finish Materials or Coatings and Exterior Wall Systems	Class 1 Fire Rated — see technical bulletin ATB-0005	
IMPACT RESISTANCE	FM 4881	Factory Mutual Approval Standard for Class 1 Exterior Wall Systems		
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	ASTM E72	Strength Tests of Panels for Building Construction	See Load Tables	
	FM 4881	Factory Mutual Approval Standard for Class 1 Exterior Wall Systems	Class 1 Approved — see technical bulletins ETB-0008 and ETB-0013	
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	State of Florida	Florida Product Approval	#16327-R1	
	TX Dept. of Insurance	Product Evaluation	Evaluation ID: EC-103	
BOND STRENGTH	Fatigue Endurance	2,000,000 Alternating Cycles of L/180 Deflection	No evidence of facer or liner delamination, fracture of foam core or permanent set	
	Freeze/Heat Cycle	Twenty-One (21) Eight-hour Temperature Cycles (–20° F to 180° F)	No evidence of delamination, blistering or permanent set	
	Humidity Endurance	1,200 Hours of 93% Humidity at a Temperature of 158° F	No evidence of delamination, blistering or interface corrosion	
	Autoclave	Exposure to 218° F and a pressure of 2-psig for 2½ hours	No evidence of facer or liner delamination	



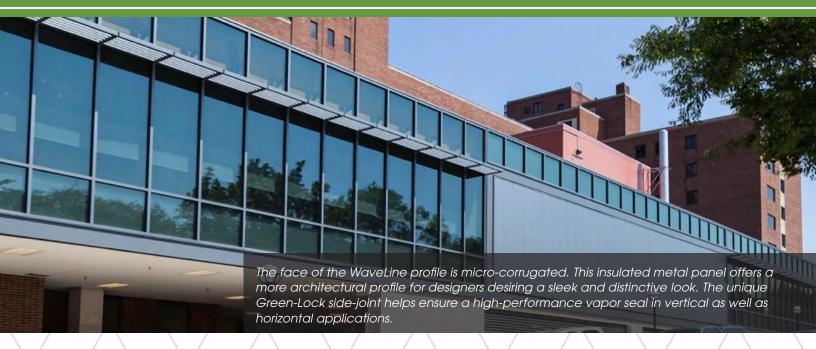












Panel Use Exterior Wall

Coverage Width 42-inch

Thickness 2, 2.5, 3, 4-inch

Length 8'-0" to 40'-0"

Exterior Gauge 24, 22

Interior Gauge 26

Exterior Substrate Galvalume® G90

Exterior Substrate Galvalume®, G90
Interior Substrate Galvalume®, G90
Exterior Finish Silicanized Polyce

Exterior Finish Siliconized Polyester, low-gloss PVDF Interior Finish Polyester, Siliconized Polyester

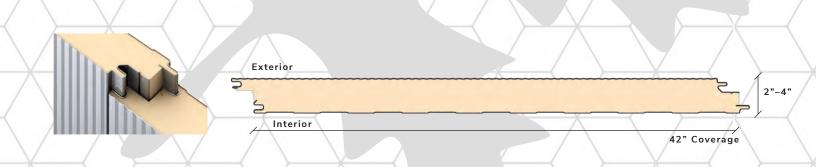
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Exterior Texture Embossed, Smooth Interior Texture Embossed, Smooth

Joint Green-Lock, offset double tongue-and-groove

Core Continuously poured-in-place polyisocyanurate insulating foam

R-Value R-8 per inch of thickness (nominal)



TESTING: WAVELINE INSULATED METAL PANEL

TYPE	TEST PROTOCOL	DESCRIPTION	RESULTS	
ENVIRONMENTAL PERFORMANCE	ASTM C518	Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus	K-Factor 0.139 BTU-in/hr-ft²-F° at 75° mean K-Factor 0.129 BTU-in/hr-ft²-F° at 35° mean	
	ASTM E283	Rate of Air Leakage Through Exterior Windows, Curtain Walls and Doors Under Specified Pressure Differences Across the Specimen	0.0011-cfm/sf at 20-psf	
	ASTM E331	Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Uniform Static Air Pressure Difference	Zero penetration at 20-psf	
FOAM CORE	ASTM C273	Shear Properties of Sandwich Core Materials	Shear Strength = 16-psi	
CHARACTERISTICS	ASTM D1621	Compressive Properties of Rigid Cellular Plastics	Compressive Strength — 18-psi	
	ASTM D1622	Apparent Density of Rigid Cellular Plastics	Apparent Density — 2.25-pcf	
	ASTM D1623	Tensile and Tensile Adhesion Properties of Rigid Cellular Plastics	Tensile Strength — 21-psi	
	ASTM D6226	Open Cell Content of Rigid Cellular Plastics	Open Cell Content ≥ 90% closed cells	
FIRE RESISTANCE	ASTM E84	Surface Burning Characteristics of Building Materials	Flame Spread < 25, Smoke Developed < 450	
RESISTANCE	NFPA 285	Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Non-Load-Bearing Wall Assemblies Containing Combustible Components	Passed — see technical bulletin ATB-0007	
	FM 4880	Factory Mutual Approval Standard for Class 1 Fire Rating of Insulated Wall or Wall and Roof/Ceiling Panels, Interior Finish Materials or Coatings and Exterior Wall Systems	Class 1 Fire Rated — see technical bulletin ATB-0005	
IMPACT RESISTANCE	FM 4881	Factory Mutual Approval Standard for Class 1 Exterior Wall Systems		
	TAS 201	Florida Building Code Impact Test Procedure	Miami Dade County NOA No. 15-0204.02	
ENGINEERING PROPERTIES	ASTM E1592	Structural Performance of Sheet Metal Roof and Siding Systems by Uniform Static Air Pressure Difference	See Load Tables	
	ASTM E72	Strength Tests of Panels for Building Construction	See Load Tables	
	FM 4881	Factory Mutual Approval Standard for Class 1 Exterior Wall Systems	Class 1 Approved — see technical bulletins ETB-0008 and ETB-0013	
APPROVALS	Miami-Dade County	Miami-Dade County Product Control Section — Notice of Acceptance	Miami Dade County NOA No. 15-0204.02	
	State of Florida	Florida Product Approval	#16327-R1	
	TX Dept. of Insurance	Product Evaluation	Evaluation ID: EC-103	
BOND STRENGTH	Fatigue Endurance	2,000,000 Alternating Cycles of L/180 Deflection	No evidence of facer or liner delamination, fracture of foam core or permanent set	
	Freeze/Heat Cycle	Twenty-One (21) Eight-hour Temperature Cycles (–20° F to 180° F)	No evidence of delamination, blistering or permanent set	
	Humidity Endurance	1,200 Hours of 93% Humidity at a Temperature of 158° F	No evidence of delamination, blistering or interface corrosion	
	Autoclave	Exposure to 218° F and a pressure of 2-psig for 2½ hours	No evidence of facer or liner delamination	

















Panel Use

Hourly Fire Rated Exterior Wall, Partition Wall, Liner Wall, Ceiling

Coverage Width

Thickness 4, 5, 6, 8, 10, 12-inch

Minimum 8'-0" to maximum 30'-0"; over 30'-0", please inquire Length

Exterior Gauge 26, 24 26 Interior Gauge

Galvalume®, G90, Stainless Steel **Exterior Substrate** Interior Substrate Galvalume®, G90, Stainless Steel

Exterior Finish Polyester, Siliconized Polyester, PVDF, Plastisol (PVC)

Polyester, Siliconized Polyester, Plastisol (PVC) Interior Finish

Exterior Texture Embossed Interior Texture **Embossed**

Joint Double tongue-and-groove with spline

Spline Fiber-reinforced cement board (1/2" x 2-3/4" x 8' long)

ROXUL® ConRock L structural mineral wool Core

0.277 Btu-in/hr-ft²-F° @ 40° F mean temperature (R-3.61) K-factor



PANEL CROSS-SECTION

PANEL SIDELAP

PERFORMANCE

Panel Thickness (in.)	Fire Rating (hr.)	Weight (psf)	Thermal U-factor (BTU / hr • ft2 • F°)	R-factor (hr • ft2 • F° / BTU)
4	1	4.6	0.069	14.49
5	2	5.3	0.055	18.18
6	3	6.0	0.046	21.74
8	3	7.5	0.035	28.57
10	3	8.9	0.028	35.71
12	3	10.3	0.023	43.48

Hourly fire-rating certifications are based upon the test method and acceptance criteria in ANSI/UL 263 (ASTM E119), "Fire Tests of Building Construction and Materials."

Panel Thickness			Uniforr	n Load (psf)			
(in.)	5	10	15	20	25	30	40
4	22.2	15.7	12.8	11.1	9.9	8.2	6.2
5	24.8	17.5	14.2	12.4	10.6	9.1	6.8
6	27.3	19.3	15.7	13.6	12.1	10.1	7.6
8	31.5	22.3	18.2	15.8	14.0	11.6	8.7
10	35.2	24.9	20.3	17.6	15.6	13.0	9.8
12	38.6	27.3	22.3	19.3	17.1	14.2	10.7



21200 FM 362 Waller, TX 77484 844-807-7400

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Standard Siliconized Polyester Roof and Wall Colors

In-stock, Standard Gloss



REGAL WHITE II LIGHT STONE SR:0.61 E:0.88 SRI:73 SR:0.50 E:0.86 SRI:57

GRAY STONE SR:0.41 E:0.86 SRI:45

Standard Polyester

Interior Only

REGAL WHITE I

Standard Fluropon PVDF Wall Colors

In-stock, Low Gloss





SURREY BEIGE SR:0.48 E:0.87 SRI:55



ROMAN BLUE

SR:0.26 E:0.87 SRI:25

Standard Fluropon PVDF Roof Colors

In-stock, Standard Gloss



Premium Metallics

Special Colors, Not in Stock, Additional Costs Will Apply



SR:0.58 E:0.78 SRI:66



LEADCOAT SR:0.37 E:0.82 SRI:38



WEATHERED GALVALUME SR:0.30 E:0.79 SRI:27



CHAMPAGNE SR:0.38 E:0.80 SRI:38



COPPER PENNY SR:0.49 E:0.85 SRI:55

Notes:

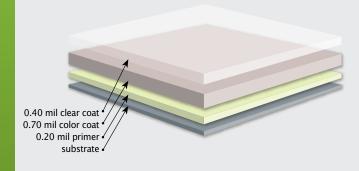
The colors above are representative and may vary slightly from actual colors. Prior to making final selections, please request actual color chip samples. SR stands for Solar Reflectivity and is the ability of a material to reflect solar energy back into the atmosphere. E stands for Emissivity and is the ability of a material to release absorbed energy back into the atmosphere. SRI represents Solar Reflective Index and is a measure of the material's ability to reject solar heat considering reflectance, emissivity and convection. All information is subject to change without notice. Please reference our web site for the most current data.



AVAILABLE COATING PRODUCTS

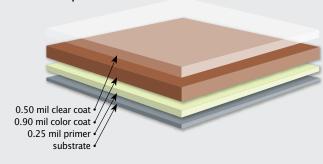
Fluropon®, WeatherX® & Dynapon®

Fluropon Premiere

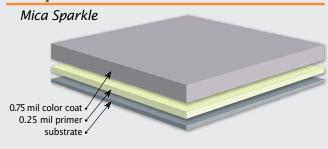


Fluropon Classic® Metallic Sparkle

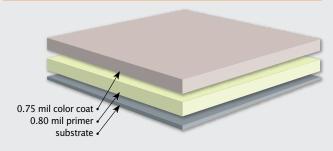
0.75 mil color coat 4 0.25 mil primer 4 substrate 4



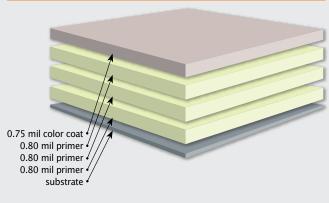
Fluropon Classic® II



Flurothane® II



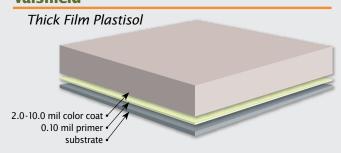
Flurothane® IV



Notosi

Kynar 500° is a registered trademark of Arkema, Inc. Hylar 5000° is a registered trademark of Solvay Solexis. All colors are produced by the Valspar Corporation. All colors are Energy Star compliant. All coatings have a min/max thickness, average thickness is shown.

Valshield®





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