

NORTH AMERICAN TESTING

PERFORMANCE RATING & TESTING

TEST	METHOD	DESCRIPTION	RESULTS	
FIRE				
	ASTM E84 - 21	Standard Method of Test for Surface Burning Characteristics of Building Materials <i>(The foregoing test procedure is comparable to UL 723, ANSI/NFPA No. 255, and UBC No. 8- 1)</i>	PASS When Tested in Accordance to ASTM E84-21 the Material Resulted in a Class 'A'	Flame Spread: 25 Smoke Developed: 75
	ASTM E84 - 18b	Standard Method of Test for Surface Burning Characteristics of Building Materials (The foregoing test procedure is comparable to UL 723, ANSI/NFPA No. 255, and UBC No. 8- 1)	PASS When Tested in Accordance to ASTM E84-21, Material Resulted in a Class 'A'	Flame Spread: 20 Smoke Developed: 300
	UL 1256 Part II - 4th	Describes a Test Which Appraises Fire Performance of Non-Metallic and Metallic Roof Deck Constructions Subjected to an Internal (Under Deck) Fire Exposure.	Flame Spread: < 10 feet in 10 minutes Flame Spread: <14 feet in 30 minutes No Thermal Degradation Through All Components of Roof Deck Assembly Decreasing Thermal Degradation With Increased Distance From Burner	3.7 Pass 7.3 Pass Met Pass Met Pass
	ASTM D1929-20	Standard Test Method for Determining Ignition Temperature of Plastics	PASS	Flash-Ignition: 387°C 730°F Self-Ignition: 429°C 805°
	CAN/ULC-S127	Standard Corner Wall Method of Test for Flammability Characteristics of Non-Melting Foam Plastic Building Materials	PASS	Flame Spread: <500 for foam core
	CAN/ULC-S101-14	National Building Code of Canada 2015 (NBC), Article 3.1.5.7. Factory Assembled Panels clause (2) item b) iii) referencing the CAN/ULC S101-14 10 Minute Remain in Place.	Meets Requirements	
	CAN/ULC-S102-10	Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies	PASS	Flame Spread: 20 Smoke Developed: 190
	CAN/ULC-S138-06	Fire Growth of Insulated Building Panels in a Full-Scale	Meets Requirements	
	CAN/ULC-S126	Evaluation of Fire Spread Under Roof-Deck Assemblies	Meets Requirements	
	CAN/ULC-S134	Fire Test of Exterior Wall Assemblies	Meets Requirements	
	NFPA 259	Test Method for Potential Heat of Building Materials	Potential heat of foam plastic insulation contained within the assembly tested in accordance NFPA 285	
	NFPA 286	Evaluating Contribution of Wall and Ceiling Interior Finish to Room Fire	Meets Requirements	
	NFPA 285	Evaluation of Fire Propagation Characteriscs of Exterior Wall Assemblies Containing Combusable Components	Pass	

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PANEL PROPERTIES			
	ASTM D1621	Compressive Properties of Rigid Foam	Minimum 14 psi
	ASTM D1622	Apparent Density of Rigid Foam	Minimum 2.1 lb/ft ³
	ASTM D2126	Dimensional Stability	-40 °C Ambient Humidity: < 0.50% change in size 93 °C Ambient Humidity: < 1.0% change in size 70 °C & 100% Relative Humidity: < 1.15% change in size No cracking, warping, deformation, or delamination observed.
	ASTM D6226	Closed Cell Content	91.6%
	ASTM D1623	Tensile Adhesion Properties	Minimum 25 psi
STRUCTURAL			
	ASTM E455, E72 and AISI S907	Shear Load Tests on Roof and Wall Panels	See Span and Load Tables
	ASTM E1592	Gravity and Uplift Load Tests on Roof Panels	See Span and Load Tables
	ANSI FM 4474	Standard for Evaluating the Simulated Wind Uplift Resistance of Roof Assemblies	Contact FALK Customer Service
THERMAL			
	ASTM C518-21	Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Meter Apparatus	K-Factor of .126 (BTU-in/hr*ft ² *°F)
	ASTM 1363	Thermal Performance of Building Materials and Envelope Assemblies	Calculated R-Value of 8.33 per inch
AIR			
	ASTM E283/ E283M-19	Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Skylights, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen	<0.1 L/s/m ² (<0.01 cfm/ft ²)
	ASTM 1680-16	Standard Test Method for Rate of Air Leakage through Exterior Metal Roof Panel Systems	<0.01 cfm/ft ² (0.1 L/s/m ²)

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WATER			
	ASTM E331-00(2016)	Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference	20 psf (958 Pa) Pass
	ASTM E1646-95	Standard Test Method for Water Penetration of Exterior Metal Roof Panel Systems by Uniform Static Air Pressure Difference Leakage through Exterior Metal Roof Panel Systems	12.0 psf (575 Pa) Pass 20.0 psf (958 Pa) Pass
	AAMA 501.1-17	Dynamic Water Penetration Resistance Test	20.0 psf (958 Pa) Pass
	ASTM E2140-01 (2023)	Standard Test Method for Water Penetration of Metal Roof Panels Systems by Static Water Pressure Head	Pass
SPECIAL			
	AC473	IAS Accreditation Criteria for Inspection programs for Manufacturers of Cold-Formed Steel (Structural and Non-Structural) Components Not Requiring Welding	Meets Requirements
	Environmental Product Declaration	SCS-EPD-10288 EPD Valid 11-8-2024 through 11-7-2029	See EPD for Details
	Florida Building Code	Florida Certificate of Product Approval # FL41818 - Structural Wall	Meets Requirements
		Florida Certificate of Product Approval # FL41819 - Structural Roof	Meets Requirements
	Texas Department of Insurance	TDI Approval TP-0877	Meets Requirements
	QAI	Building Product Listing Program Listing # B1142-1	See Listing for Details

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FM APPROVALS

PRODUCT	WIDTH	CORE THICKNESS	APPROVAL STANDARD				SPECIFICATIONS
			4880	4881	4470	4471	
Hidden Fixed Wall Panel (HFW)	40"	2.5" - 6"	✓	✓			4'-10' purlin spacings with 14 gauge purlin +/- 45-110 psf Zone Tropical Cyclone
Cold Storage Wall Panel (CSW)	44"	2.5" - 8"	✓				Class A - Unlimited height
Standing Seam Roof Panel (SSR)	42"	3" - 6"	✓			✓	RoofNav #568917 3', 5', and 8' purlin spacings with 14 gauge purlin Wind Uplift Rating: 165 psf Internal Fire Rating: Class 1 External Fire Rating: Class A Hail Rating: Severe Hail Slope Rating: 5:12
Ribbed Roof Panel (RRP)	40"	2.5" - 6"	✓			✓	RoofNav #568918 5' purlin spacing with 16 gauge purlin Wind Uplift Rating: 1-105 psf Internal Fire Rating: Class 1 External Fire Rating: Class A Hail Rating: Severe Hail Slope Rating: 5:12
RDEK Panel	40"	2.5"-6"	✓		✓	✓	RoofNav #568919 & #568920 5' purlin spacing with 16 gauge purlin Wind Uplift Rating: 1-105 & 1-120 psf Internal Fire Rating: Class 1 External Fire Rating: Class A Hail Rating: Severe Hail Slope Rating: 0.5:12 & 1.5:12

Contact FALK Customer Service for more details.



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