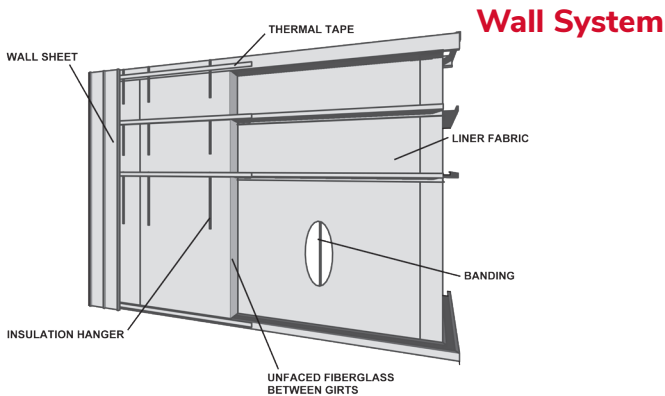
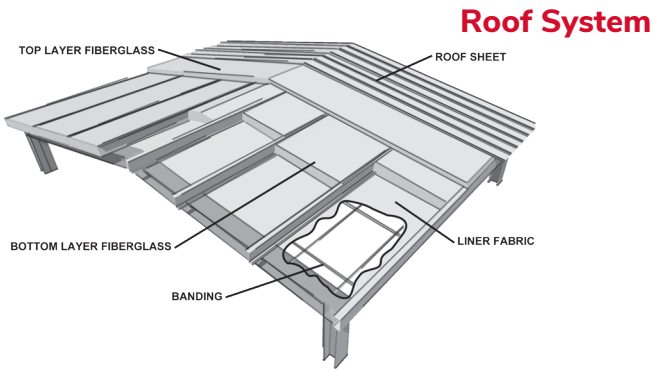


ProLiner™ Banded Liner System

Bi-Directional Banding Providing OSHA-Compliant Leading-Edge Fall Protection

Product Data Sheet



Physical Properties

Property	Test Method	Value
Insulation		
Surface Burning Characteristics: * Flame Spread Index * Smoke Developed Index	ASTM E84	< 25 < 50
Combustion Characteristics	ASTM E136	Noncombustible
Water Vapor Sorption	ASTM C1104	≤ 0.2% by volume
Odor Emission	ASTM C1304	No objectionable odor ¹
Corrosiveness	ASTM C665	No corrosion greater than comparative item
Fungi Resistance	ASTM C1338	No growth greater than comparative item
Liner Fabric		
Surface Burning Characteristics (white side exposed) Flame Spread Smoke Developed	UL 723 (ASTM E84)	0 28
Water Vapor Permeance	ASTM E96 Method A	0.02 perms
Fungi Resistance	ASTM C1336	No Growth (ATCC #'s 9642, 6205, 11797, 11730 and 9643)
Tensile Strength	ASTM D5034	Warp 130 lb 577 N Weft 115 lb 510 N
Light Reflectance	ASTM E1477	84

1. No odor for a minimum of 3 of 5 panel members.

Description

The ProLiner™ Banded Liner System is a thermal insulation and moisture control system for metal building construction. It consists of three components:

1. A polyethylene vapor retarder liner fabric, available in white or black
2. Galvanized metal support straps (bands)
3. One or two layers of EcoTouch® Certified R Metal Building Insulation

Applications

- Metal building roof assemblies
- Metal building wall assemblies

Availability

EcoTouch® Certified R Metal Building Insulation ¹		
Pre-laminated R-Value	Laminated R-Value	Thickness (inches)
10.8	10	3.4
11.9	11	3.7
14.1	13	4.3
17.3	16	5.3
20.6	19	6.3
22.8	21	6.7
27.1	25	8.0
32.5	30	9.25

1. Manufactured in accordance with NAIMA standard 202-96 revision 2000. When installed as part of the ProLiner™ Banded Liner System, use "pre-laminated" R-value.

Features

- Thermal performance - full range of insulation R-values (see "Availability" table) to meet energy conservation code requirements in all climate zones
- Moisture control - polyethylene liner fabric provides code required vapor retarder (see water vapor permeance value on "Physical Properties" table)
- Noise control - improves the building interior environment by reducing noise transfer from both exterior and interior sources (see "Sound Absorption" and "Acoustic Data" tables)
- Durable, cleanable finish - the liner fabric is strong and highly reflective for better interior lighting efficiency (see data in "Physical Properties" table). It can also be easily cleaned with water and mild detergent

Sound Absorption

EcoTouch® Insulation for Metal Building Roof and Wall Configurations^{1,2}

Insulation Total R-Value	Absorption Coefficients at Octave Band Frequencies						
	125	250	500	1000	2000	4000	NRC
25	0.59	1.09	0.83	0.59	0.31	0.11	0.70
30	0.71	1.10	0.87	0.57	0.31	0.13	0.70
35	0.80	1.10	0.90	0.56	0.30	0.14	0.70
40	0.84	1.07	0.92	0.59	0.31	0.11	0.70
44	0.68	0.98	0.92	0.58	0.31	0.13	0.70
49	0.67	1.01	0.92	0.56	0.31	0.14	0.70

1. Sound absorption testing in accordance with ASTM C423.

2. All testing conducted with the facing towards the soundfield as in actual use condition.

Assembly U-factors¹

Metal Building Walls		
Thermal Break	Cavity Insulation	Assembly U-factor
None	R-15 MBI+	0.074
None	R-19 MBI+	0.066
1/8" Foam	R-25 MBI+	0.057
1/8" Foam	R-30 MBI+	0.049
Certified R-13	R-30 MBI+	0.042

Calculations based on hot box testing using 8" girts spaced 5' on center.

Metal Building Roofs		
Insulation System	Insulation R-value	Assembly U-factor
Standing Seam Roofs with Thermal Spacer Block ^{ab}		
Liner System	R-19 + R-11	0.037
	R-25 + R-8	0.037
	R-25 + R-11	0.031
	R-30 + R-11	0.029
	R-25 + R-11 + R-11	0.026
Standing Seam Roofs without Thermal Spacer Block		
Liner System	R-19 + R-11	0.040
Through-Fastened Roofs without Thermal Spacer Block		
Liner System	R-19 + R-11	0.044

- a. A standing seam roof clip that provides a minimum 1.5" in distance from underside of roof and top of purlin.
 b. A minimum R-3 thermal spacer block is required.

Standards, Codes Compliance

- EcoTouch® Certified R Metal Building insulation is manufactured in accordance with ASTM C991, Fibrous Glass Insulation for Metal Buildings, Type I.
- Liner fabric meets ASTM C1136, Standard Specification for Flexible, Low Permeance Vapor Retarders for Thermal Insulation Type I - VI.

Installation Recommendations

When installed in strict compliance with the following Bi-Directional Banding instructions and by a "Competent Person" as defined in OSHA Standard 29 CFR 1926.751, ProLiner™ meets the requirements of OSHA Standard 29 CFR 1926.502 (c)(4)(i) and OSHA Standard 29 CFR 1926.760 (a)(1) for leading edge fall protection and OSHA Standard 29 CFR 1926.754 (e)(3)(i) covers for roof and floor openings. Any deviation from these installation instructions or substitution of any original components will nullify compliance with these OSHA standards. Other means of fall protection, such as perimeter safety or guide lines, must be used at all times during the installation of the support banding and prior to the completed placement of the liner support fabric. The use of ProLiner™ is only one part of the overall site-specific safety plan for the construction site.

Environmental and Sustainability

Therm-All is a national leader in metal building insulation solutions, delivering a broad range of high-quality products and services. Therm-All is committed to driving sustainability by delivering innovative products for today's complex energy code landscape. For more information, visit www.therm-all.com.

Acoustic Data

Sound Transmission Loss^{1,2}

		Transmission Loss - dB at Octave Band Frequencies											
		Clip Standoff (inches)	Top Layer Insulation R-Value	Bottom Layer Insulation R-Value								STC	OITC
Construction Type					125	250	500	1000	2000	4000			
Roofs	Through Fastened	NA	10	19	14	26	35	40	49	51	37	36	
	Through Fastened	NA	19	30	18	32	42	50	57	57	42	41	
	Standing Seam	0.25	10	19	14	26	34	44	52	53	36	36	
	Standing Seam	1.25	19	30	19	32	42	56	63	58	42	41	
	Standing Seam	1.75	19	30	20	32	42	56	62	58	42	42	
		Transmission Loss - dB at Octave Band Frequencies											
		Foam Tape Thickness (inches)	Single Layer Insulation R-Value								STC	OITC	
Construction Type				125	250	500	1000	2000	4000				
Walls	Through Fastened	0.125	25	15	26	35	41	50	53	37	36		
	Through Fastened	0.375	30	17	29	38	45	54	54	39	38		

1. Sound Transmission Loss Tested in accordance with ASTM E90.
 2. Values are given for design approximations only. Production and test variabilities will alter the results.

Certifications and Sustainable Features*

- Certified by SCS Global Services to contain a minimum of 65% recycled glass content, 18% pre-consumer and 47% post-consumer
- GREENGUARD Certified products are certified to GREENGUARD standards for low chemical emissions into indoor air during product usage. For more information, visit ul.com/gg
- Environmental Product Declaration (EPD) has been certified by UL Environment
- Material Health Certificate from Cradle to Cradle Products Innovation Institute

*All certifications noted are for the EcoTouch® Certified R insulation only and do not apply to the liner fabric.



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