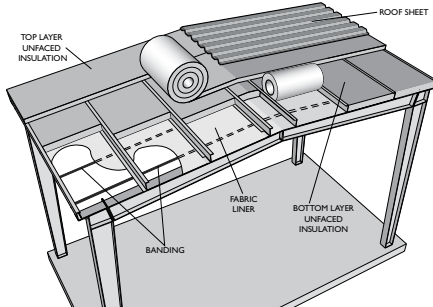


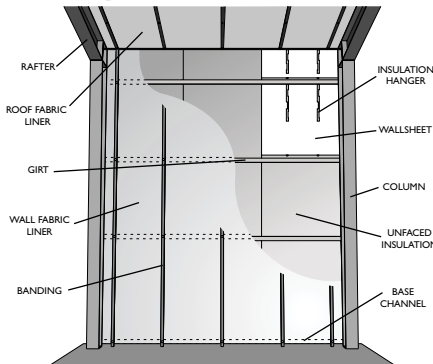


Product Data Sheet

Roof System



Wall System



Description

The OptiLiner® Banded Liner System is the latest metal building product offering from Owens Corning that is designed to maximize the thermal performance of Owens Corning™ EcoTouch® Insulation for MBI Plus with PureFiber® Technology light density fiberglass insulation in metal building roof and wall applications.

The OptiLiner® roof system uses a series of 1.0" galvanized steel straps to support a bright white or black polyethylene fabric that serves as the low permeance vapor retarder for the system. Fabric sections are custom fit for each bay in order to ensure a swift installation and a clean interior finished appearance. The

installed banding and fabric support system allows roof cavities to be completely filled using two layers of Owens Corning™ EcoTouch® Insulation for MBI Plus Metal Building. Completely filling the cavity results in minimal insulation compression and maximum system thermal performance. The amount of banding installed in the OptiLiner® system can be minimized, however **WORKERS MUST USE OSHA REQUIRED FALL PROTECTION WHEN INSTALLING THE BANDED LINER SYSTEM AT HEIGHTS. (SEE OSHA REGULATIONS AT 29 CFR 1926, SUBPART M).**

Banding reduction saves time and installation cost without sacrificing excellent in place thermal performance.

The OptiLiner® wall system uses the same basic components as the roof system. Additional materials included with the wall system are insulation hangers that are used to support unfaced insulation in the wall cavities and foam tape that is installed between the wall girts and the wall sheets in order to enhance system thermal performance. A minimum amount of 1.0" galvanized steel banding is installed after the fabric is in place to help support the insulation and to provide a consistent interior finish with the roof system. Using both the OptiLiner® roof and wall system will provide excellent thermal, acoustic and appearance benefits for a metal building.

PureFiber® Technology Advantages

- Verified formaldehyde-free¹ and soft to the touch
- Certified by SCS Global Services to contain a minimum of 65% recycled glass content, 18% pre-consumer and 47% post-consumer
- Certified to meet indoor air quality standards under the GREENGUARD Certification Program and the GREENGUARD Gold Certification Program
- Thickness recovery provides outstanding thermal and acoustical performance

Uses

OptiLiner® System is a high R-Value roof and wall insulation system that can be installed in metal buildings in order to maximize system thermal performance.

Product Attributes

Excellent Thermal Performance
Minimal insulation compression in the OptiLiner® roof and wall systems allows for excellent thermal performance. Installing the OptiLiner® systems will help minimize the heating and cooling costs associated with conditioning a metal building. Further, the OptiLiner® roof and wall system uses Owens Corning™ EcoTouch® Insulation for Metal Building in every application. This will ensure thermal performance and minimize any potential performance variability based on the brand of insulation used in the system.

¹ Applies to the insulation component only.



Product Data Sheet

Exceptional Vapor Retarder

Custom fit fabric sections with thermally welded seams and low permeance properties provide excellent long-term vapor sealing for the system. A properly installed OptiLiner® system will help minimize concerns with concealed condensation.

Detailed System Acoustic Testing

The OptiLiner® roof and wall insulation systems improve the acoustical environment both inside and outside of a metal building. Multiple roof and wall constructions have been tested to determine their Noise Reduction Coefficient (NRC), Sound Transmission Loss (STL), Sound Transmission Class (STC) and Outdoor-Indoor Transmission Class (OITC) values.

High Recycle Content of Insulation Materials

All Owens Corning™ EcoTouch® Insulation for Metal Building products are third party certified to contain a minimum of 65% recycled content (47% post-consumer and 18% pre-consumer). High recycled content helps building professionals achieve LEED® certification and meet other green building guidelines that are an increasingly critical measurements used in sustainable building.

Physical Properties

Property	Test Method	Value
Insulation		
Noncombustibility	ASTM E136	Noncombustible
Water Vapor Sorption	ASTM C1104	< 5% by weight
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
Facing		
Facing Permeance	ASTM E96	≤ 0.02 perms
Fungi Resistance	ASTM C1338	No growth greater than comparative item

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

Availability¹

EcoTouch® Insulation for MBI Plus Insulation Systems

Roof Systems

Top Layer Insulation R-Value	Bottom Layer Insulation R-Value	Insulation Total R-Value
10	19	29
11	19	30
13	19	32
10	25	35
16	19	35
11	25	36
13	25	38
19	19	38
10	30	40
11	30	41
16	25	41
13	30	43
19	25	44
16	30	46
19	30	49

Availability¹

EcoTouch® Insulation for MBI Plus Insulation Systems

Wall Systems

Single Layer of Unfaced EcoTouch® Insulation for MBI Plus Insulation R-Value

19 ²
25
30

EcoTouch® Insulation for MBI Plus Insulation Thickness

R-Value	Thickness (inches)
10	3.4
11	3.7
13	4.3
16	5.3
19	6.3
25	8.0
30	9.0

- Owens Corning™ R-7.0 EcoTouch® Insulation for Metal Building Utility Blanket is available as top layer of insulation when used in conjunction with an R-25 or R-30 bottom layer. See the Owens Corning™ EcoTouch® Insulation for Metal Building Utility Blanket Product Data Sheet for insulation specification compliance details.
- R-19 should only be used in applications with a 6.0" wall girt or less.

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

- Sound absorption testing in accordance with ASTM C423.
- All testing conducted with the facing towards the soundfield as in actual use condition.



Product Data Sheet

Acoustic Data

Sound Transmission Loss^{1,2}

	Construction Type	Clip Standoff (inches)	Top Layer Insulation R-Value	Bottom Layer Insulation R-Value	Transmission Loss - dB at Octave Band Frequencies							
					125	250	500	1000	2000	4000	STC	OITC
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
	Construction Type	Foam Tape Thickness (inches)	Single Layer Insulation R-Value	Transmission Loss - dB at Octave Band Frequencies								
				125	250	500	1000	2000	4000	STC	OITC	
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.

Meets Model Fire Code Ratings

Both the fabric and insulation materials have a flame spread rating of 25 or less and a smoke developed rating of 50 or less. This usually means that the products will be granted immediate building code approval.

Bright and Resilient Interior Finish

The OptiLiner® white fabric is stronger than traditional facings used in metal buildings. The bright white color has a light reflectance rating of greater than 80%, which may allow for reduced lighting loads in the design space.

GREENGUARD Certified

All Owens Corning™ EcoTouch® Insulation for Metal Building products are certified to meet indoor air quality standards under the GREENGUARD Certification Program and the GREENGUARD Gold Certification Program.

Cleanable Facing

A soft cloth with soap and water or non-abrasive household cleaner can be used to clean the facing. Solvent-based cleaners and abrasive pads should be avoided.

Application Recommendations

OptiLiner® Roof System—
WORKERS MUST USE OSHA REQUIRED FALL PROTECTION WHEN INSTALLING THE BANDED LINER SYSTEM AT HEIGHTS. (SEE OSHA REGULATIONS AT 29 CFR 1926, SUBPART M).

Proper safety measures should be taken when installing the OptiLiner® roof system. An installing contractor should employ a site specific fall protection plan.

Detailed roof and wall application recommendations can be found in the roof and wall installation guides for the OptiLiner® system.

Technical Data—Insulation² Fire Resistance

ASTM E84, UL 723 or NFPA 255 Test Methods for Surface Burning Characteristics of Building Materials³ – Max Flame Spread Index 25; Max Smoke Developed Index 50

2. EcoTouch® Insulation for MBI Plus products are not certified to the ASTM C991 standard or the NAIMA 202-96 Rev 2000 standard as these products are not designed to be post processed via lamination. Projects requiring certification to these standards should use unfaced Owens Corning™ EcoTouch® Insulation for Certified R Metal Building
3. The surface burning characteristics of these products have been determined in accordance with ASTM E84, UL 723 or NFPA 255. These standards should be used to measure and describe the properties of materials, products or assemblies in response to heat and flame under controlled laboratory conditions and should not be used to describe or appraise the fire hazard or fire risk of materials, products or assemblies under actual fire conditions. However, results of this test may be used as elements of a fire risk assessment which takes into account all of the factors which are pertinent to an assessment of the fire hazard of a particular end use. Values are reported to the nearest 5 rating.



Product Data Sheet

Technical Data—Liner Fabric

Material Standards

ASTM C1136—Standard Specification for Flexible, Low Permeance Vapor Retarders for Thermal Insulation Type I–VI⁴

Fire Hazard Classification—Liner Fabric

ASTM E84 Standard Test Method for Surface Burning Characteristics of Building Materials³ – Max Flame Spread Index 25; Max Smoke Developed Index 50

⁴ Type I-IV exception for dimensional stability. Value is < 2.0%.

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SCS Global Services provides independent verification of recycled content in building materials and verifies recycled content claims made by manufacturers. For more information, visit www.SCSglobalservices.com.

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.



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