

Specification sheets are available for:

## ■ New Buildings

- Skyliner<sup>®</sup> Insulation System for new metal building systems
- Division 7 – Thermal Protection; Section 07213 pre-engineered building insulation
- Division 13 – Special Construction; Section 13, 34, 19 metal building systems



## GET THE FEATURES THAT MATTER MOST



### Energy Efficient

- NAIMA 202-96(R) (Rev 2000) Fiberglass or Metal Building Insulation Filler Blanket

- Tested Assemblies

- Meets or exceeds all codes and standards, including ASHRAE, IECC, California Title 24. Washington, Oregon, Florida

- Meets OSHA requirements for leading-edge fall protection

- Class A Fire Rated

- Bright white fabric covers purlins and girts

- Less banding

- Exclusive Safety Banding and Clip System

- Bay-wide and long-length fabric

- Strong tarp-like fabric

- 0.02 perm-rated vapor retardant fabric

- Local Bay Insulation Systems plant support

- Skyliner<sup>®</sup> XQ layout drawings

- Easy install instructions

- Fabric packaged in rolls, on a core, for easy dispensing on the roof

- Flange Brace Covers Facilitate Standard Connections



### Smart Money



### Time Savings



### Leading-Edge Fall Protection

## PART I - GENERAL

Acceptable Liner System is Skyliner<sup>®</sup> FP or Skyliner<sup>®</sup> Insulation System from Bay Insulation Systems, a tested, high-performance insulation system. System achieves performance U Factor of \_\_\_\_\_ or installed R-value of \_\_\_\_\_ for metal building construction. System is provided complete, from one source (Bay Insulation Systems) and includes banding, clips, adhesive, fasteners, fabric, insulation, layout drawings and installation manual. Skyliner<sup>®</sup> FP System meets OSHA duty to have fall protection standard 29 CFR – 1926.501. This system also conforms to and complies with testing protocol for CFR 1926.501 (b)(4); CFR 1926.502(4)(1) CFR 1926.502 (i)(2); and CFR 1926.502.

NAIMA 202-96(R) (Rev 2000) certified fiberglass insulation or Metal Building Insulation Filler Blanket will fill purlin cavity (or wall cavity) and consist of \_\_\_\_\_ layers. Nominal 1" x 3" extruded polystyrene thermal blocks\* will be applied to the top of the purlins for double layer applications (minimum R value 3.0). Thermal break tape will be applied to top of purlin (roof) or outside of girts – (walls) for single-layer applications. (Sky Hook™ (82 pcs/box) or Insul Hold HD (coils) required for walls.) Fabric will be 1 bay in width and attach underneath the purlin (inside girt), secured by a banding grid. Safety banding (roof) will be installed parallel to each frame and 16" from the frame, secured by safety clips. The installed roof or wall system provides a continuous vapor retarder.

\*Thermal blocks are not included with the Skyliner Insulation System

## PART II – PRODUCTS – SYSTEM COMPONENT MINIMUM REQUIREMENTS

### A. Fabric

1. Black Material, White Backing – light reflectance value – 84
2. Fabric Description: Woven, HPDE Scrim premium, low-permeance vapor retarder for thermal insulation. Coated both sides (1.5 mil average) black/ white colored polyethelyne film.
  - a. Fabric supplied in full bay widths and custom lengths – Produced to fit large building areas with minimum field seaming required.
  - b. Can be supplied perforated.
3. Shipped folded and rolled onto a core for quick deployment on support grid.
  - a. Core ID 3" (76.2mm) or 4" (101.6mm)
4. Vapor retardant – .015 perm rating
  - a. Chemical resistance  
HDPE – excellent chemical resistance. It is not attacked by strong acids or strong bases and is resistant to gentle oxidants and reducing agents.
  - b. HDPE with coating has excellent chemical resistance, superior strength, and long-term durability.
5. Tear Strength: 50 lbs. warp x 45 lbs. weft (ASTM D-751, Tongue)
6. Tensile Strength: 170 lbs. warp x 150 lbs. weft (ASTM D-751, Grab)
7. Mullen burst: 270 psi (ASTM D-751)
8. UV Weathering: UV Additive in scrim and coating for extra protection
9. Thermal Integrity: – 20°F & 150°F Pass (ASTM C-1263 or newer)
10. Fungi Resistance – No Growth (ASTM C 1338 or newer)
11. Weight – 4.8 oz/yd<sup>2</sup> (163 g/m<sup>2</sup>) +/- 10% (ASTM D-1910)
12. Thickness – Nominal 8 mil (0.2032mm)

### 13. Sound Absorption\*\* – NRC=.70

Insulation Total R-Value	Absorption Coefficients at Octave Band Frequencies						NRC
	125	250	500	1000	2000	4000	
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.

### 14. Sound Transmission Loss<sup>‡§</sup>

#### a. Roofs

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

#### b. Walls

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

‡Sound Transmission Loss Tested in accordance with ASTM E90.

§Values are given for design approximations only. Production and test variabilities will alter the results.

## B. Fall Protection

1. OSHA 29 CFR 1926.502C4i – Standard for leading-edge fall protection. The Drop test shall consist of a 400 lb (180 kg) bag of sand 30 + or - 2" (76 + or - 5 cm) in diameter dropped into the net from the highest walking/working surface at which employees are exposed to fall hazards, but not from less than 42" (1.1 m) above that level.
2. OSHA 1926.501 – Duty to have Fall Protection
3. OSHA 1926.501 (b)(4) – Holes
4. OSHA 1926.502(i)(2) All other covers shall be capable of supporting, without failure, at least twice the weight of employees, equipment and materials that may be imposed on the cover at any one time.
5. OSHA 1926.502 – fall protection criteria and practices
6. 40 CFR 1926.754(e)(i) – covering roof and floor openings

## C. Banding

1. 1" x .023 continuous length black metal banding

## D. Fasteners & Clips

1. Safety Clip System includes exclusive offset clip + fastener + banding – 16" either side of each frame. (Required for fall protection installation.)
2. Tek 2 and Tek 4.5 (supplied with system)

## E. Adhesive

1. Skyliner 514 Macroplast brush or spray adhesive (Avetone; Heptone)
2. Skyliner double faced tape

## F. Insulation

1. Meets Standard NAIMA 202-96 (R) (Rev 2000) certified flexible fiberglass insulation for use in metal buildings or Metal Building Insulation Filler Blanket. (Installed in One or Two Layers.)

## G. System Standards:

1. ASTM C991 – Standard for flexible fibrous glass insulation for metal buildings.
2. ASTM C 1136 – Standard specification for flexible, low permeance vapor retarders for thermal insulation.
3. ASTM E 84 – Standard for surface burning characteristics of building materials.
4. ASTM E 96 – Standard test method for water vapor transmission of materials in sheet form.
5. ASTM E 2178-13 -- Standard test method for air permeance of metal buildings.
6. NAIMA 202-96(R) (Rev 2000) –Standard for flexible fiberglass insulation for use in metal buildings or Metal Building Insulation Filler Blanket.
7. NFPA 255 – Standard method of test for surface burning characteristics of building materials.

## H. Manufacturer Will Provide

1. Install Manual
2. Certification Sheets
3. Fabric Shop Drawings
4. Product Warranty

## I. Acceptable Manufacturers

1. Bay Insulation Systems
2. Owens Corning
3. CertainTeed

## J. Warranties

1. Fabric – limited 10-year material
2. Insulation – 1-year material
3. System – limited 10-year material

## PART III – INSTALLATION MANUALS PROVIDED

### A. New Buildings Fall Protection (FP)

### B. Existing Buildings

### C. Walls

### D. Specialty Buildings – Ice Arenas, etc.

Skyliner® Specification Sheets are also available for Existing Buildings & Specialty Buildings.

## ASHRAE-90.1 2013, 2016 & 2019 PRESCRIPTIVE SOLUTIONS (METAL BUILDING ROOFS)

### SS Roof + R-3 TB

R-19 + R-11	U = 0.037
R-25 + R-8	U = 0.037
R-25 + R-11	U = 0.031
R-30 + R-11	U = 0.029
R-25 + R-11 + R-11	U = 0.026

## ASHRAE 90.1 2016 & 2019 PRESCRIPTIVE SOLUTIONS (METAL BUILDING WALLS)

R-25 + R-0.375 TBT	U = 0.059
R-30 + R-0.75 TBT	U = 0.052



[www.SkylinerSystems.com](http://www.SkylinerSystems.com)

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For information on the Skyliner® Insulation System, contact your Bay District Manager, call **844.999.7153** or visit **[www.SkylinerSystems.com](http://www.SkylinerSystems.com)**