Technical Bulletin

Code Compliance of Senergy Senerflex Classic PB, Secondary Weather Barrier and Senturion EIFS

IBC and IRC - 2009, 2012, 2015 and 2018

Exterior Insulation and Finish Systems have been included in the International Building Code (IBC) and International Residential Code (IRC) since the 2009 versions were published. The IBC and IRC are the basis for national and local construction regulations in the United States and abroad.

IBC Section 1408 governs the materials and construction of EIFS on commercial construction – with reference to IBC Section 2603.5 for fire performance (NFPA 285, NFPA 268, ASTM E119, etc). IRC Section R703.9 governs for EIFS on residential construction (one and two family dwellings and townhouses).

Within both the IBC and IRC, ASTM E2568 is the standard cited for EIFS performance compliance. In addition, ASTM E2273 is cited for EIFS with Drainage and ASTM E2570 is included for fluid applied water-resistive barriers.

Senerflex Classic PB and Secondary Weather Barrier comply with the performance requirements of Section 1408 and Section 2603.5 for fire performance. They are code compliant on all types of construction under the IBC except framed walls of Type V construction in R1, R2, R3 or R4 occupancy group. Under the IRC, Classic PB and Secondary Weather Barrier are limited to use on concrete or masonry walls.

The Senturion systems comply with IBC Section 1408 including the requirements for drainage performance, and Section 2603.5 for fire performance. They comply with the requirements set forth in IRC Section R703.9. The Senturion systems are code compliant on all types of construction under the IBC and IRC.

The tables on the following pages provide further information regarding the compliant assemblies tested for specific requirements such as noncombustible construction.

Table 1 – Wind Load Design Senerflex Classic PB and Secondary Weather Barrier

FRAMING		SUBSTRATE	INSULATION	
TYPE	**MAXIMUM SPACING (INCH)**		**EPS MIN THICKNESS (INCH)**	**ALLOWABLE WIND LOAD (PSF)**
2x4 wood	24	Min 7/16" wood structural panel attached in accordance with code or ½" ASTM C1396 or C1177 gypsum attached with #8 x 1 ¼" screws at 8" o.c.	¾	30 positive 30 negative
3 5/8" 20 ga steel		Min 7/16" wood structural panel attached in accordance with code or ½" ASTM C1396 or C1177 gypsum attached with #8 x 1 ¼" screws at 8" o.c. on edges and 12" o.c. in field		30 positive 23 negative
3 5/8" 18 ga steel		Min 7/16" wood structural panel attached in accordance with code or ½" ASTM C1396 or C1177 gypsum attached with #8 x 1 ¼" screws at 8" o.c. on edges and 12" o.c. in field		30 positive 30 negative
3 5/8" 18 ga steel	16	Metal lath fastened through ½" ASTM C1396 or C1177 gypsum attached with #8 x 1 ¼" screws at 8" o.c.		54 positive 54 negative
N/A	N/A	Concrete or masonry		Positive limited to capacity of concrete or masonry 30 negative

*Framing members must be designed to resist all positive and negative transverse loads with a maximum allowable deflection of 1/240 of the span
*Above results represent failures in the framing and/or sheathing connections, not failure of the Senerflex Classic PB or Secondary Weather Barrier

Table 2 – Wind Load Design Senturion I, II and III Systems

FRAMING		SUBSTRATE	INSULATION		
TYPE	MAXIMUM SPACING (INCH)		EPS MIN THICKNESS (INCH)	ATTACHMENT	ALLOWABLE WIND LOAD (PSF)
2x4 wood	16	Min 7/16" wood structural panel, attached in accordance with the code	1	Wind-Devil 2 plates; W series fasteners with 5/8" penetration through sheathing, 8 fasteners per board spaced 12 inches on center vertically and horizontally	27 positive 35 negative
			2		28 positive 41 negative
			1 1/2 (channeled)		52 positive 28 negative
	24		1		19 positive 33 negative
			2		19 positive 36 negative
3 5/8-inch-by No. 20 gage steel	16	Min ½" ASTM C1396 or C1177 gypsum, min 7/16" wood structural panel, ASTM C1325 cement board. Attached per code	1	Wind-Devil 2 plates; wood sheathing W series fasteners with 5/8" penetration through sheathing, 8 fasteners per board spaced 12 inches on center vertically and horizontally; gypsum or cement board sheathing S series fasteners with 5/8" penetration through studs, 12 fasteners per board spaced 8 inches on center vertically	21 positive 29 negative
			2		21 positive 29 negative
	24		1	Wind-Devil 2 plates; wood sheathing W series fasteners with 5/8" penetration through sheathing, 8 fasteners per board spaced 12 inches on center vertically and horizontally; gypsum or cement board sheathing S series fasteners with 5/8" penetration through studs, 9 fasteners per board spaced 8 inches on center vertically	10 positive 21 negative
			2		12 positive 21 negative

*Framing members must be designed to resist all positive and negative transverse loads with a maximum allowable deflection of 1/240 of the span

Table 3 – Assemblies for Use in IBC Types I – IV (non-combustible) Construction

FRAMING MEMBERS			INTERIOR SHEATHING			EXTERIOR SHEATHING			INSULATION BOARD THICKNESS MAXIMUM (INCHES)
STEEL MIN DEPTH (INCHES)		MAX SPACING (INCHES)	TYPE1	MIN THICKNESS (INCH)	MAX FASTENER SPACING (INCHES)	TYPE	MIN THICKNESS (INCH)	MAX FASTENER SPACING (INCHES)	
SENERFLEX AND SECONDARY WEATHER BARRIER SYSTEMS									
3 5/8	20	16 oc	ASTM C36 or ASTM C1396	½	8 oc on joints 12 oc in field	ASTM C79 or ASTM C1396 or ASTM C1177	½	8 oc	13
SENTURION I, II and III									
3 5/8	20	16 oc	ASTM C36 or ASTM C1396	½	8 oc on joints 12 oc in field	ASTM C79 or ASTM C1396 or ASTM C1177	½	8 oc	4

*The fasteners are #6 x 1 ¼ inch long bugle head screws.
**When applied directly to concrete or masonry, the walls may be considered noncombustible construction.
***Openings must be framed with minimum No. 20 gage steel studs and tracks.

Table 3 – Assemblies for Use in IBC Types I – IV (non-combustible) Construction

FRAMING MEMBERS			INTERIOR SHEATHING			EXTERIOR SHEATHING			INSULATION BOARD THICKNESS MAXIMUM (INCHES)
STEEL MIN DEPTH (INCHES)	MIN GAGE	MAX SPACING (INCHES)	TYPE	MIN THICKNESS (INCH)	MAX FASTENER SPACING (INCHES)	TYPE	MIN THICKNESS (INCH)	MAX FASTENER SPACING (INCHES)	
SENERFLEX, SECONDARY WEATHER BARRIER AND SENTURION I, II AND III									
3 5/8	18	16 oc	ASTM C36 or ASTM C1396	5/8	8 oc on joints 12 o.c. in field	ASTM C79 or ASTM C1396 or ASTM C1177	5/8	8 o.c. on joints 12 o.c. in field	4

*The fasteners are #6 x 1 5/8 inch long bugle head screws.

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