

DIVISION: 07 00 00 – THERMAL AND MOISTURE PROTECTION
Section: 07 24 00 – Exterior Insulation and Finish Systems (EIFS)
Section 07 24 19 - Water-drainage Exterior Insulation and Finish System

REPORT HOLDER:
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REPORT SUBJECT:
AkroFlex Barrier, AkroFlex Water Managed (WM), And AkroFlex Water Managed Plus (WM+) Exterior Insulation and Finish Systems

1.0 SCOPE OF EVALUATION

1.1 This Research Report addresses compliance with the following Codes:

- 2021 and 2018 *International Building Code*® (IBC)
- 2021 and 2018 *International Residential Code*® (IRC)

NOTE: This report references the most recent Code editions noted. Section numbers in earlier editions may differ.

1.2 The AkroFlex exterior insulation and finish systems (EIFS) have been evaluated for the following properties (see Table 1):

- Physical properties
- Weather resistance
- Wind resistance
- Surface burning characteristics

1.3 The AkroFlex EIF systems have been evaluated for the following uses (see Table 1):

- Use as an exterior wall covering complying with IBC Section 1407 and IRC Section 703.9
- Use as EIFS with drainage in accordance with IBC Section 1407.4.1 and IRC Section R703.9.2

- Use in Types I, II, III, IV and V construction
- Use as interior wall and finish material in accordance with IBC section 803 and IRC Section R302.9.

2.0 STATEMENT OF COMPLIANCE

The AkroFlex EIF systems comply with the Codes listed in Section 1.1, for the properties stated in Section 1.2 and uses stated in Section 1.3, when installed as described in this report, including the Conditions of Use stated in Section 6.

3.0 DESCRIPTION

3.1 AkroFlex Barrier System: The AkroFlex Barrier system consists of a water-resistive coating (optional), adhesively applied EPS insulation board, reinforcing mesh, base coat, and finish coat. See Table 2 for system components.

3.2 AkroFlex Water Managed (WM) System: The AkroFlex WM system consists of a water-resistive barrier or coating, mechanically attached EPS insulation board, reinforcing mesh, base coat, weep screed starter track, and finish coat. See Table 2 for system components.

3.3 AkroFlex Water Managed Plus (WM+) System: The AkroFlex WM+ system consists of a water-resistive coating, adhesively applied EPS insulation board, reinforcing mesh, weep screed starter track, base coat, and finish coat. See Table 2 for system components.

3.4 Insulation: EPS insulation boards must be minimum Type I complying with ASTM C578 and must also comply with ASTM E2430. The insulation boards must be certified in accordance with ASTM E84 or UL 723 having a flame spread index of 25 or less and a smoke-developed index of 450 or less.

3.5 Substrates: Substrates must be one of the following:

- Gypsum sheathing complying with ASTM C1396 or ASTM C1177
- Exposure 1 wood structural panels complying with DOC PS-1 or PS-2
- Exterior Cement board, complying with ASTM C1325



- Concrete or concrete-masonry complying with the code
- Brick masonry complying with the code
- Portland cement plaster complying with the code

3.6 AkroGuard Water-resistive Coating: AkroGuard is a water-resistive coating system used where a water-resistive barrier is required. See CCRR-0465.

3.7 Water-resistive barriers: Water-resistive barriers used with the AkroFlex systems must comply with IBC Section 1403.2 or IC Section R703.2 or must be certified as complying with ASTM E2556 or ICC-ES AC38.

3.8 Sealants: Sealants must comply with ASTM C920, Type S or M, minimum Grade NS, minimum Class 25 or Use O.

4.0 PERFORMANCE CHARACTERISTICS

4.1 Physical Properties: When installed in accordance with this report, the system complies with IBC Section 1407 and with ASTM E2568.

4.2 Wind Resistance: Allowable wind loads for specific constructions are described in Table 3.

4.3 Drainage Efficiency: When installed in accordance with Section 5.3, the system has a drainage efficiency of 90% or greater, based on testing in accordance with ASTM E2273.

4.4 Flame Spread Characteristics: The EIFS finish has a flame-spread index of 25 or less and a smoke-developed index of 450 or less when tested in accordance with ASTM E84.

4.5 Use in Types I, II, III and IV Construction: When installed in accordance with Section 5.4, the assembly complies with NFPA 285-19.

5.0 INSTALLATION

5.1 General:

The AkroFlex Barrier, WM and WM+ EIF systems must be installed in accordance with the manufacturer's published installation instructions, the applicable code and this research report. A copy of the manufacturer's instructions must be available on the jobsite during installation.

The AkroFlex Barrier, WM and WM+ systems must be installed in accordance with table 2 and the omega products installation instructions found at www.omega-products.com/.

5.2 Drainage:

5.2.1 AkroFlex WM: Drainage is provided by 3/8-in. deep corrugations spaced at 1-in. on center on the back side of minimum 1-1/2-in.-thick EPS boards.

5.2.2 AkroFlex WM+: Drainage is provided by vertical ribbons of adhesive applied to the back side of the flat EPS board using a 3/8-in.-by-3/8-in.-by-1-1/2-in. notched trowel.

5.2.3 Installation under the IRC: Installation must include drainage except when installed over substrates of concrete or masonry.

5.3 Use In Types I, II, III and IV Construction:

See Table 4 for assemblies recognized for use in Types I, II, III and IV construction.

5.4 Special Inspections:

Special inspections in accordance with IBC Section 1705.1.1 are required for application of the water-resistive barrier (see Section 3.7) except when the installation is done by an installer or contractor trained by Omega Products International, and a certificate of installation is presented to the code official at the completion of the project.

6.0 CONDITIONS OF USE

6.1 Installation must comply with this Research Report, the manufacturer's published installation instructions, and the applicable Code. In the event of a conflict, this report governs.

6.2 Installation must be by contractors acceptable to Omega Products International.

6.3 The EPS insulation boards must be separated from the building interior by a thermal barrier complying with the applicable code.





6.4 Special inspection shall be provided in accordance with IBC Section 1705.17, except as noted in Section 5.5 of this report.

6.5 The AkroFlex EIFS must terminate not less than 6 inches above grade and exposed earth.

6.6 Decorative trim shall not be face-nailed through the EIFS.

6.7 The AkroFlex system components are manufactured under a quality control program with inspections by Intertek Testing Services NA, Inc.

7.0 SUPPORTING EVIDENCE

7.1 Reports of tests in accordance with ASTM E2568, ASTM E2273, ASTM E330, ASTM E331, NFPA 268, NFPA 285.

7.2 Intertek Listing Report "[Name of listing report]", on the [Intertek Directory of Building Products](#).

8.0 IDENTIFICATION

The AkroFlex EIFS components are identified with the Omega Products International name, the product name, the lot or batch number, storage instructions, expiration date, the Intertek Mark as shown below, the Intertek Control Number and the Code Compliance Research Report number (CCRR-0466).



OTHER CODES

This section is not applicable.

10.0 CODE COMPLIANCE RESEARCH REPORT USE

10.1 Approval of building products and/or materials can only be granted by a building official having legal authority in the specific jurisdiction where approval is sought.

10.2 Code Compliance Research Reports shall not be used in any manner that implies an endorsement of the product by Intertek.

10.3 Reference to the <https://bpdirectory.intertek.com> is recommended to ascertain the current version and status of this report.

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TABLE 1 - PROPERTIES EVALUATED

PROPERTY	2021 IBC SECTION ¹	2021 IRC SECTION ¹	2019 CBC SECTION ¹	2019 CRC SECTION ¹
Physical properties	1407.2	R703.9	1407.2	R703.9
Weather resistance	1407.4	R703.9, R703.1.1, R703.2	1407.4	R703.9, R703.1.1, R703.2
Wind resistance	1407.3	R703.9, R703.1.2	1407.3	R703.9, R703.1.2
Surface burning characteristics	803	R302.9	803	R302.9
Use in Types I, II, III and IV construction	2603.5	NA	2603.5	NA

¹Section numbers in earlier editions of the code may differ.

TABLE 2 - SYSTEM DESCRIPTIONS

SYSTEM	WATER-RESISTIVE BARRIER	EPS INSULATION BOARD		BASE COAT ¹	FINISH
		Fastening	Type		
AkroFlex Barrier	(Optional) AkroGuard coating system ²	Adhesively	Flat	StyroGlue, StyroGlue DryBond, StyroGlue TF	AkroFlex
AkroFlex WM	AkroGuard coating system ² , or code-complying water-resistive barrier	Mechanically fastened per Table 3	Corrugated		
AkroFlex WM+	AkroGuard coating system ²	Adhesively applied with StyroGlue or SyroGlue DryBond	Flat		

¹Mesh must be minimum 4 oz/yd²

²See CCRR-0465



TABLE 3 – WIND RESISTANCE - AKROFLEX BARRIER AND WM+ SYSTEMS^{1, 2, 3}

Framing		Sheathing		EIFS		
Type	Max. Spacing	Sheathing Type	Attachment	Coating	Allowable Wind Load (psf)	
					Neg.	Pos.
2 x 4 Wood	16 in. oc	1/2-in. gypsum sheathing, cement board or wood structural panels	1-1/2-in. 6d common nails at 8 in. oc	Akroflex EIFS applied over min. 1-in.-thick EPS insulation board	26	26
		1/2-in. glass-mat gypsum board	1-1/2-in. 6d common nails at 6 in. oc		26	26
		1/2-in. gypsum sheathing, cement board or wood structural panels	1-1/2-in. No. 6 self-drilling bugle head, Type W screws at 8 in. oc		36	36
		1/2-in. glass-mat gypsum board	1-1/2-in. No. 6 self-drilling bugle head, Type W screws at 6 in. oc		36	36
2 x 4 wood	16 in. oc	5/8-in. gypsum sheathing, cement board or wood structural panels	1-1/2-in. 6d common nails at 8 in. oc	Akroflex EIFS applied over min. 1-in.-thick EPS insulation board	26	26
		5/8-in. glass-mat gypsum board	1-1/2-in. 6d common nails at 6 in. oc		26	26
		5/8-in. gypsum sheathing, cement board or wood structural panels	1-1/2-in. No. 6 self-drilling bugle head, Type W screws at 8 in. oc		36	36
		5/8-in. glass-mat gypsum board	1-1/2-in. No. 6 self-drilling bugle head, Type W screws at 6 in. oc		36	36
3-5/8-in., No. 18 gage steel	16 in. oc	1/2-in. gypsum sheathing, cement board or wood structural panels	1-1/4-in. No. 6 self-drilling bugle head, Type S screws at 8 in. oc	Akroflex EIFS applied over min. 1-in.-thick EPS insulation board	36	36
		1/2-in. glass-mat gypsum board	1-1/4-in. No. 6 self-drilling bugle head, Type S screws at 6 in. oc		36	36
3-5/8-in. No. 18 gage steel	24 in. oc	5/8-in. gypsum sheathing, glass-mat gypsum board, cement board or wood structural panels	1-1/4-in. No. 6 self-drilling bugle head, Type S screws at 6 in. oc	Akroflex EIFS applied over min. 1-in.-thick EPS insulation board	31	31
3-5/8-in. No. 20 gage steel	16 in. oc	1/2-in. gypsum sheathing, cement board or wood structural panels	1-1/4-in. No. 8 self-drilling bugle head Type S screws at 8 in. oc	Akroflex EIFS applied over min. 1-in.-thick EPS insulation board	36	36
		1/2-in. glass-mat gypsum board	1-1/4-in. No. 8 self-drilling bugle head Type S screws at 6 in. oc		36	36
3-5/8-in. No. 20 gage steel	24 in. oc	1/2-in. gypsum sheathing, glass-mat gypsum board, cement board or wood structural panels	1-1/4-in. No. 8 self-drilling bugle head Type S screws at 6 in. oc	Akroflex EIFS applied over min. 1-in.-thick EPS insulation board	31	31

¹See Section 3.6 for requirements for sheathing boards.

²Deflection for framing members must not exceed 1/240 of the span.

³Allowable loads are applicable for the EIF system attached to concrete and concrete-masonry walls.



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TABLE 4 - WIND RESISTANCE - AKROFLEX WM SYSTEM

Fasteners (See Figure 1)	Sheathing	Framing Members		Fastener	Min. EPS Thickness	Allowable Wind Load (psf)	
		Type	Max. Spacing			Pos.	Neg.
Pattern A	Wood structural panels	2 x 4 Wood, or No. 20 gage steel	16	Wind Devil, Plasti- Grip III or Plasti- Grip IV washers	1	21	21
					1-1/2	31	31
Pattern B	Wood structural panels	2 x 4 Wood, or No. 20 gage steel	16	Wind Devil II washers	1	40	40
					1-1/2	43	43
Pattern C	Wood structural panels, gypsum sheathing, glass- mat gypsum board, cement board	2 x 4 Wood, or No. 20 gage steel	16	Wind Devil II washers	1	28	29
					1-1/2	38	38

¹Deflection for framing members must not exceed 1/240 of the span.

³Fasteners must be applicable for the stud type and must have an allowable withdrawal capacity greater than the allowable wind load shown in the Table.

TABLE 5 – ASSEMBLIES FOR USE IN TYPES I, II, III AND IV CONSTRUCTION

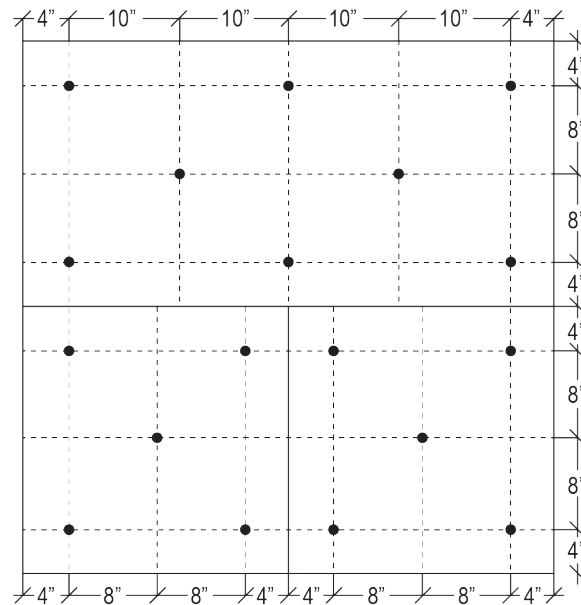
Framing		Interior Sheathing		Exterior Sheathing		Insulation Board	Coating
Type	Max. Spacing	Type	Fasteners and spacing	Type	Fasteners and spacing		
Studs and openings, min. 3-5/8-in. No. 20 gage steel; Tracks - min.No. 18 gage steel	24 in. oc	Min. 5/8-in.-thick Type X gypsum board complying with ASTM C1396 or ASTM C1177	Min. #6 x 1-3/8-in. Type S-12 bugle-head screws spaced per code	Min. 5/8-in.-thick Type X gypsum board complying with ASTM C1396 or ASTM C1177	Min. #6 x 1-3/8-in. Type S-12 bugle-head screws spaced at 6-in.	1 pcf EPS, max. 4 in. thick	AkroFlex Barrier, WM or WM+
Min. 3-5/8-in. No. 20 gage steel	24 in. oc	Min. 1/2-in.-thick Type X gypsum board complying with ASTM C1396 or ASTM C1177	Min. #6 x 1-1/4-in. Type S bugle-head screws spaced at 8-in. on the perimeter and 12-in. in the field	Min. 1/2-in.-thick Type X gypsum board complying with ASTM C1396 or ASTM C1177	Min. #6 x 1-1/4-in. Type S bugle-head screws spaced at 8-in.	1 pcf EPS, max. 4 in. thick	AkroFlex Barrier, WM or WM+

¹For buildings greater than 40 feet above grade plane, AkroGuard water-resistive coating must be used.

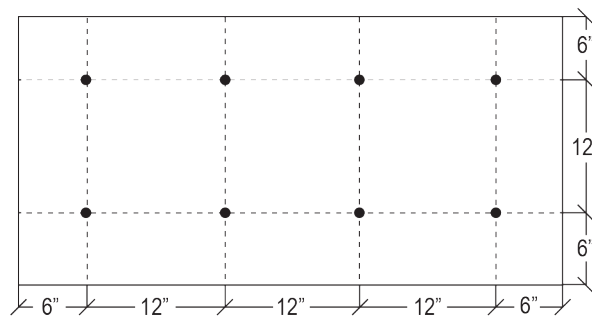
²Min. 4-in., 4 pcf USG Thermafiber Safing Insulation must be friction-fit into stud cavities at floor lines.

³Joints in interior sheathing boards and nail heads must be taped and treated with joint compound per ASTM C840 or GA216.

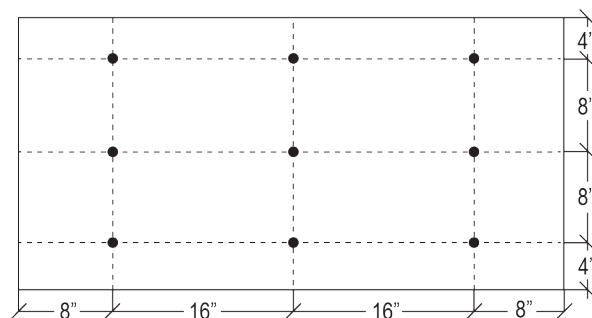




FASTENER LAYOUT OPTION A



FASTENER LAYOUT OPTION B



FASTENER LAYOUT OPTION C

FIGURE 1 - Fastener Patterns

