

Product Evaluation

EC49 | 0120

Engineering Services Program

The following product has been evaluated for compliance with the wind loads specified in the International Residential Code (IRC) and the International Building Code (IBC).

This product evaluation is not an endorsement of this product or a recommendation that this product be used. The Texas Department of Insurance has not authorized the use of any information contained in the product evaluation for advertising, or other commercial or promotional purpose.

This product evaluation is intended for use by those individuals who are following the design wind load criteria in Chapter 3 of the IRC and Section 1609 of the IBC. The design loads determined for the building or structure shall not exceed the design load rating specified for the products shown in the limitations section of this product evaluation. This product evaluation does not relieve a Texas licensed engineer of his responsibilities as outlined in the Texas Insurance Code, the Texas Administrative Code, and the Texas Engineering Practice Act.

For more information, contact TDI Engineering Services Program at (800) 248-6032.

Evaluation ID: EC-49

Effective Date: January 1, 2020

Re-evaluation Date: January 2024

Product Name: Master Wall® Aggre-Flex Drainage Class PB EIFS, Rollershield Drainage Class PB CIFS®, QRW1 Drainage Class PI EIFS

Manufacturer: Master Wall Inc.®
P.O. Box 397
Fortson, GA 30058
(800) 755-0825

General Description:

The following types of wall systems have been accepted for use: Master Wall® Aggre-Flex Drainage Class PB EIFS, Rollershield Drainage Class PB CIFS®, and QRW1 Drainage Class PI EIFS.

The Master Wall® EIFS may be used as an exterior wall finish on buildings. The system consists of five or more components that are applied to exterior walls sheathed with wood structural panels or glass mat faced gypsum sheathing.

Wall System Description:

Aggre-Flex Drainage Class PB EIFS: Weather resistive barrier applied over a substrate; EPS insulation board; base coat with reinforcing mesh; and a Superior Textured Finish.

Rollershield Drainage Class PB EIFS®: Rollershield Air/Water Barrier applied over a substrate; EPS insulation board; base coat with reinforcing mesh; and a Superior Textured Finish.

QRW1 Drainage Class PI EIFS: Weather resistive barrier applied over a substrate; PI insulation board; base coat with reinforcing mesh; and a Superior Textured Finish.

Components:

Insulation:

4' x 8' Polyisocyanurate (PI) foam plastic insulation boards. Boards comply with ASTM C1289, Type II, with a nominal density of 2 pcf.

2' x 4' Expanded Polystyrene (EPS) foam plastic insulation boards. The boards comply with ASTM C578, Type I and ASTM E2430 with a nominal density of 1 pcf.

Master Wall® EPSA (Expanded Polystyrene Adhesive). A one-part non-cementitious translucent grey adhesive used to secure the insulation boards to the substrate.

Master Wall® Foam & Mesh (F&M) Adhesive. Liquid acrylic-based combined at the jobsite with Type I or I-II Portland cement.

Master Wall® Aggre-Flex Mesh. An open-weave, glass-fiber mesh.

Finish Coat. Master Wall® Superior Finishes are acrylic-based material that are available in various colors and textures.

Limitations:

All fasteners must be corrosion resistant.

Do not use the Master Wall® EIFS as wall bracing.

Installation must be by applicators that are acceptable to Master Wall®.

Sheathing must be attached to the wall framing to resist the required wind pressures.

Installation:

Wind Resistant Assemblies:

Assembly No. 1

Aggre-Flex Drainage Class PB EIFS over 2x4 wood framing

Design pressure: -35 psf

Installation:

Wall Framing: Wall framing must be minimum nominal 2x4 Spruce-Pine-Fir dimension lumber. The wall stud spacing must not exceed 16" on center. Wall bracing must be installed as required.

Wall Sheathing: The wall studs must be sheathed with minimum 1/2" inch thick plywood.

Insulation: 2' x 4' x 1-1/2" thick EPS. Mechanically attached to the wall studs with 2" diameter Wind Devil 2 plates and Wind-Lock No. 6 x 2" screws spaced a maximum of 12" on center along each wall stud.

Water Resistive Barrier: Two (2) layers of minimum No. 15 asphalt felt complying with ASTM d 226, Type 1 felt. The felt is secured to the wall framing with minimum 1/2" crown galvanized staples. The fasteners are applied along the framing members of sufficient spacing to hold in place.

EIFS Installation: Refer to "Application of EIFS to Substrate" in this evaluation report.

Assembly No. 2

Rollershield Drainage Class PB CIFS® over 2x4 wood framing

Design pressure: -60 psf

Installation:

Wall Framing: Wall framing must be minimum nominal 2x4 Spruce-Pine-Fir dimension lumber. The wall stud spacing must not exceed 16" on center. Wall bracing must be installed as required.

Wall Sheathing: The wall studs must be sheathed with minimum 1/2" inch thick plywood.

Water Resistive Barrier: Rollershield Air and Water Barrier.

Insulation: 2' x 4' x 3/4" thick EPS. Adhered over the Rollershield Air and Water Barrier.

EIFS Installation: Refer to "Application of EIFS to Substrate" in this evaluation report.

Assembly No. 3

Rollershield Drainage Class PB CIFS® over 2x4 wood framing

Design pressure: -55 psf

Installation:

Wall Framing: Wall framing must be minimum nominal 2x4 Spruce-Pine-Fir dimension lumber. The wall stud spacing must not exceed 16" on center. Wall bracing must be installed as required.

Wall Sheathing: The wall studs must be sheathed with minimum 7/16" thick OSB.

Water Resistive Barrier: Rollershield Air and Water Barrier.

Insulation: 2' x 4' x 3/4" thick EPS. Adhered over the Rollershield Air and Water Barrier.

EIFS Installation: Refer to "Application of EIFS to Substrate" in this evaluation report.

Assembly No. 4

Aggre-Flex and Rollershield Drainage Class PB CIFS® over 2x4 wood framing

Design pressure: -45 psf

Installation:

Wall Framing: Wall framing must be minimum nominal 2x4 Spruce-Pine-Fir dimension lumber. The wall stud spacing must not exceed 16" on center. Wall bracing must be installed as required.

Wall Sheathing: The wall studs must be sheathed with minimum 1/2" thick ASTM C1396 exterior gypsum sheathing.

Water Resistive Barrier: Rollershield Air and Water Barrier.

Insulation: 2' x 4' x 3/4" thick EPS. Adhered over the Rollershield Air and Water Barrier.

EIFS Installation: Refer to "Application of EIFS to Substrate" in this evaluation report.

Assembly No. 5

QRW1 Drainage Class PI EIFS over 2x4 wood framing

Design pressure: -30 psf

Installation:

Wall Framing: Wall framing must be minimum nominal 2x4 Spruce-Pine-Fir dimension lumber. The wall stud spacing must not exceed 16" on center. Wall bracing must be installed as required.

Wall Sheathing: The wall studs must be sheathed with minimum 1/2" thick OSB.

Insulation: 4' x 8' x 5/8" Polyisocyanurate (PI) foam plastic insulation boards. Mechanically attached to the wall studs with Wind-Lock ULP-303 plates and No. 6 x 1-5/8" screws spaced a maximum of 12" on center in the field and 8" on center along the edges.

Water Resistive Barrier: Two (2) layers of minimum No. 15 asphalt felt complying with ASTM d 226, Type 1 felt. The felt is secured to the wall framing with minimum 1/2" crown galvanized staples. The fasteners are applied along the framing members of sufficient spacing to hold in place.

EIFS Installation: Refer to "Application of EIFS to Substrate" in this evaluation report.

Assembly No. 6**Aggre-Flex and Rollershield Drainage Class PB EIFS® over 18-gauge steel framing****Design pressure:** -50 psf**Installation:**

Wall Framing: Wall framing must be minimum 3-5/8" 18-gauge steel framing. The steel framing spacing must not exceed 16" on center. Wall bracing must be installed as required.

Wall Sheathing: The wall studs must be sheathed with minimum 1/2" thick ASTM C1396 exterior gypsum sheathing.

Water Resistive Barrier: Rollershield Air and Water Barrier.

Insulation: 2' x 4' x 3/4" thick EPS with a nominal density of 1 pcf. Adhered over the Rollershield Air and Water Barrier.

EIFS Installation: Refer to "Application of EIFS to Substrate" in this evaluation report.

Assembly No. 7**Aggre-Flex and Rollershield Drainage Class PB EIFS® over 18-gauge steel framing****Design pressure:** -75 psf**Installation:**

Wall Framing: Wall framing must be minimum 3-5/8" 18-gauge steel framing. The steel framing spacing must not exceed 16" on center. Wall bracing must be installed as required.

Wall Sheathing: The wall studs must be sheathed with minimum 5/8" thick ASTM C1396 exterior gypsum sheathing.

Water Resistive Barrier: Rollershield Air and Water Barrier.

Insulation: 2' x 4' x 3/4" thick EPS with a nominal density of 1 pcf. Adhered over the Rollershield Air and Water Barrier.

EIFS Installation: Refer to "Application of EIFS to Substrate" in this evaluation report.

Assembly No. 8**Aggre-Flex and Rollershield Drainage Class PB EIFS® over 18-gauge steel framing****Design pressure:** -60 psf**Installation:**

Wall Framing: Wall framing must be minimum 3-5/8" 18-gauge steel framing. The steel framing spacing must not exceed 12" on center. Wall bracing must be installed as required.

Wall Sheathing: The wall studs must be sheathed with minimum 5/8" thick ASTM C1396 exterior gypsum sheathing.

Water Resistive Barrier: Rollershield Air and Water Barrier.

Insulation: 2' x 4' x 3/4" thick EPS with a nominal density of 1 pcf. Adhered over the Rollershield Air and Water Barrier.

EIFS Installation: Refer to "Application of EIFS to Substrate" in this evaluation report.

Assembly No. 9

Aggre-Flex and Rollershield Drainage Class PB EIFS® over 18-gauge steel framing

Design pressure: -45 psf

Installation:

Wall Framing: Wall framing must be minimum 3-5/8" 18-gauge steel framing. The steel framing spacing must not exceed 16" on center. Wall bracing must be installed as required.

Wall Sheathing: The wall studs must be sheathed with minimum 1/2" thick ASTM C1177 glass fiber exterior gypsum sheathing.

Water Resistive Barrier: Rollershield Air and Water Barrier.

Insulation: 2' x 4' x 3/4" thick EPS with a nominal density of 1 pcf. Adhered over the Rollershield Air and Water Barrier.

EIFS Installation: Refer to "Application of EIFS to Substrate" in this evaluation report.

Application of EIFS to Substrate

All components of the EIF System must be applied over dry surfaces and out of direct sunlight. The EIF System should be installed only when the ambient air temperature is greater than or equal to 40 degrees Fahrenheit. Surfaces must be clean, dry, unpainted, and free from any residue that may affect the bonding process. Any surface contaminants must be removed without damaging the substrate surface.

Install the EIFS as specified in the manufacturer's installation instructions and this evaluation report. In the event that the manufacturer's installation instructions conflict with this evaluation report, the more restrictive requirement governs.

The Rollershield Air/Water Barrier is installed as specified in the manufacturer's installation instructions.

Apply insulation board to sheathed substrates. Attach the boards either mechanically or adhered as specified in the "Wind Resistant Assemblies" of this evaluation report. For adhered applications, apply the Master Wall® EPSA adhesive directly to the back of the insulation board.

Using a trowel with the ribbons no further apart than 2" on center. The entire surface of the board must be covered with the ribbons of the adhesive. Place the insulation boards in a running bond pattern on the walls with the long dimension horizontal, starting from a level base line. Apply firm pressure over the entire surface of the insulation board to ensure uniform contact. The insulation board joints must bridge sheathing joints by a minimum of 8". All joints must be butted together to eliminate any thermal breaks. Fill in any gaps wider than 1/16" in the insulation board layer with slivers of insulation board.

After installing the insulation board, apply the F&M Base Coat over the insulation board using either spray equipment or a stainless-steel trowel to a uniform thickness of approximately 1/16". Immediately embed the Reinforcing Mesh into the wet base coat by troweling from the center to the edge of the mesh. The mesh must be double wrapped at all corners and overlapped not less than 2" at mesh seams and at overlaps of detail mesh. The mesh must be fully embedded so that no mesh color shows through the base coat when it is dry. Note: If a primer coat is used, apply with a brush, roller, or proper spray equipment over the clean, dry base coat and allow to dry thoroughly before applying finish.

After the base coat has dried, apply the Master Wall Finish Coat directly over the base coat (or primer coat). Apply the finish by spraying or troweling with a stainless-steel trowel. Apply the finish in a continuous application, and work to a wet edge. The finish must be protected from the weather until dry.

Note: Keep the manufacturer's installation instructions on the job site during installation. Use corrosion resistant fasteners as specified in the IRC and the IBC.