

ICC-ES Evaluation Report

ESR-2562

Reissued August 1, 2010

This report is subject to re-examination in two years.

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DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION
Section: 07 24 00—Exterior Insulation and Finish Systems
REPORT HOLDER:
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EVALUATION SUBJECT:
PAREX WATERMASTER DB SYSTEM AND PAREX STANDARD WATERMASTER SYSTEM

1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2009 *International Building Code* (IBC)
- 2009 *International Residential Code* (IRC)

Properties evaluated:

PROPERTY	IBC CHAPTER	IRC CHAPTER
Exterior insulation and finish systems (EIFS)	14	R7
Fire-resistance-rated construction	7	R3
Weather resistance	14	R7
Structural – transverse wind load resistance	16	R6
Special inspections	17	NA
Surface burning characteristics	26	R3
Types I – IV (noncombustible) construction	26	NA
Ignition resistance	26	NA

2.0 USES

The Parex WaterMaster DB system and the Parex Standard WaterMaster system are exterior insulation and finish systems (EIFS) complying with IBC Section 1408 and IRC Section R703.9. The systems comply with the requirements of IBC Section 1408.4.1 and IRC Section R703.9 as EIFS with drainage.

These systems may be used in fire-resistance-rated construction and any construction Type (IBC Types I through V) when installed in accordance with this report.

3.0 DESCRIPTION

3.1 System Components:

See Table 1. The WaterMaster DB and Standard WaterMaster systems consist of a water-resistive coating, adhesively applied EPS, reinforcing mesh, base coat and finish coat.

3.2 Insulation Board:

The insulation board must be one of the following:

- a. Parex WaterMaster Insulation Board is expanded polystyrene complying with ASTM C 578, Type I, and ASTM E 2430; has a flame spread index of 75 or less and a smoke developed index of 450 or less when tested in accordance with ASTM E 84 or UL723; is produced by a molder that participates in an approved third-party quality assurance program; and is labeled in accordance with Section 7.0 of this report. Insulation boards must have 1/4-inch-deep-by-1 1/2-inch wide (3.2 mm by 38 mm) corrugations across the width of the board.
- b. EPS insulation board may be produced by a molder with a current evaluation report stating conformance to ASTM E 2430 and is labeled in accordance with the applicable report.
- c. EPS insulation boards may be produced under a quality control program with an approved agency, provided the boards are listed for compliance with ASTM C 578, Type I; compliance with ASTM E 2430; demonstrate a flame spread index of 75 or less and a smoke-developed index of 450 or less, when tested in accordance with ASTM E 84 or UL723; and are labeled in accordance with Section 7.0 of this report.

3.3 Substrates:

- Gypsum sheathing complying with ASTM C 1396 or ASTM C 1177
- Fiber cement panels complying with the ICC-ES Acceptance Criteria for Fiber Cement Siding Used as Exterior Wall Siding (AC90), and ASTM C 1186
- Fiber cement panels complying with the ICC-ES Acceptance Criteria for Reinforced Cementitious Sheets Used as Wall and Ceiling Sheathing and Floor Underlayment (AC376), and ASTM C 1325
- Concrete-masonry complying with the code
- Concrete complying with the code
- Exterior plaster complying with the code
- Exposure 1 wood structural panels complying with DOC PS 1 or PS-2
- Brick masonry complying with the code

3.4 Sealants:

Sealants must comply with ASTM C 920, Type S or M, minimum Grade NS, minimum Class 25 and use O.

4.0 DESIGN AND INSTALLATION

4.1 General:

Parex USA, Inc., EIF systems shall be installed in accordance with the manufacturer's installation instructions, specifications and details available for the Standard WaterMaster System at <http://www.parex.com/details.shtml> and for the WaterMaster DB System at <http://www.parex.com/documents.shtml>.

4.2 Drainage Options:

- Parex WaterMaster DB system: channeled insulation board
- Parex Standard WaterMaster system: vertical ribbons of adhesive with flat insulation board

4.3 Wind Design:

Table 2 presents specific assemblies for which test data has been submitted. Other assemblies may be considered for approval by local officials based on testing and/or calculations of a qualified design professional.

4.4 Weather Protection:

The Parex Standard WaterMaster and WaterMaster DB systems comply with IBC Section 1403.2 and IRC Section R703.1.1.

4.5 Use in Types I through IV Construction:

Table 3 describes the assemblies qualified for use in Types I through IV construction.

4.6 Fire-resistance-rated Construction:

Table 4 describes the assemblies qualified for use in nonload-bearing fire-resistance-rated construction. In addition, in Type V construction, the Parex WaterMaster DB system and the Parex Standard WaterMaster system may be attached to the surface of combustible exterior fire-resistance-rated assemblies described in IBC Table 720.1(2) without changing the assigned hourly rating of the assembly. The exterior wall must have a minimum 10-foot (3048 mm) separation distance from adjacent construction.

4.7 Special Inspections:

For recognition under the IBC, special inspections of the water-resistive coating must be conducted in accordance with Section 1704.14.1 of the code. Refer to the Parex USA, Inc., Third Party Inspection Guidelines for verifying field preparation of materials.

5.0 CONDITIONS OF USE

The Parex WaterMaster DB system and the Parex Standard WaterMaster system described in this report comply with, or are suitable alternatives to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

- 5.1 Installation must comply with this report, the manufacturer's published installation instructions and the applicable code. In the event of a conflict between the manufacturer's instructions and this report, this report governs.
- 5.2 The insulation board must be separated from the building interior by a thermal barrier complying with the applicable code.
- 5.3 Installation must be by applicators listed by Parex USA, Inc.
- 5.4 Termination of the systems must not be less than 6 inches (152 mm) above finished grade in accordance with IBC Section 2603.8 and IRC Section R320.5.

6.0 EVIDENCE SUBMITTED

- 6.1 Reports of tests in accordance with ASTM E 2568 and ASTM E 2273.
- 6.2 Data in accordance with the ICC-ES Acceptance Criteria for EIFS Clad Drainage Wall Assemblies (AC235), dated October 2009.
- 6.3 Data in accordance with the ICC-ES Acceptance Criteria for Foam Plastic Insulation (AC12), dated June 2009.
- 6.4 Data in accordance with the ICC-ES Acceptance Criteria for Water-resistive Coatings Used as Water-resistive Barriers over Exterior Sheathing (AC212), dated October 2009.

7.0 IDENTIFICATION

Each container or package used as part of the Parex WaterMaster DB system and the Parex Standard WaterMaster system must be labeled with the Parex USA, Inc., name and address; the product name; lot or batch number; quantity of material; storage instructions; pot life; expiration date; and the evaluation report number (ESR-1689). Parex WaterMaster Insulation Boards must be labeled on the edge of each board with the Parex USA, Inc., name, the plant identification number, the name of the inspection agency (RADCO) and the evaluation report number (ESR-2562). Other foam plastic insulation must be labeled in accordance with the current ICC-ES evaluation report in which it is recognized, or in accordance with IBC Section 2603.2 or IRC Section 316.2, as applicable.

TABLE 1—SYSTEM COMPONENTS

System	Water-Resistive Barrier	Adhesive	Base Coat	Reinforcing Mesh	Finish
Parex Water Master DB	Keycoat 395A	Keycoat 395A	Parex 121	Standard Reinforcing Mesh, 4.5 oz/yd ² , minimum ¹	DPR Acrylic Finish 300 Series DPR Acrylic Finish 500 Series DPR Optimum Finish
Parex Standard WaterMaster	WeatherSeal Spray & Roll-On	Parex 121	Parex 121		

¹Higher weight meshes are allowable.

TABLE 2—WIND LOAD DESIGN

Framing ³		Substrate	EPS		
Type	Maximum Spacing (inch)		EPS minimum Thickness (inch)	Coating	Allowable Wind Load (psf)
2x4 Wood ¹	16	ASTM C 1177 glass-mat gypsum sheathing, attached with #6 x 1 ¹ / ₄ inch buglehead screws at 8-inches on center, or Plywood sheathing attached in accordance with the code	1	Parex Water Master DB or Parex Standard WaterMaster system described in Table 1	56 positive, 35 negative
3 ⁵ / ₈ -inch-by-No. 20 gage-steel					35 positive, 25 negative
N/A	N/A	Concrete, or Concrete-masonry	1	Parex WaterMaster DB or Parex Standard WaterMaster system described in Table 1	Positive – see note 2, 35, negative

SI: 1 inch = 25.4 mm; 1 psf = 0.0479 kPa.

¹Minimum 2x4 Wood Framing, minimum specific gravity 0.42.

²Maximum positive pressure is limited to the capacity of the concrete or concrete masonry substrate, determined in accordance with the applicable code.

³The framing members must be designed to resist all positive and negative transverse design loads with a maximum allowable deflection of 1/240 of the span.

TABLE 3—ASSEMBLIES FOR USE IN TYPES I THROUGH IV CONSTRUCTION

Framing Members			Interior Sheathing			Exterior Sheathing			Insulation Board Thickness Maximum (inches)
Steel		Max. Spacing (inches)	Type	Min. Thickness (inch)	Max. Fastener Spacing (inches)	Type	Min. Thickness (inch)	Max. Fastener Spacing (inches)	
Min. Depth (inches)	Min. Gage								
3 ⁵ / ₈	20	16 o.c.	ASTM C36 or ASTM C 1396	1/2	8 o.c.	C1177	1/2	8 o.c.	4

For SI: 1 inch = 25.4 mm.

¹Fasteners are minimum No. 6, 18-thread-per-inch, minimum 1¹/₄-in-long corrosion-resistant steel, self drilling buglehead screws.

²Coating system is as described in Table 1.

TABLE 4—FIRE-RESISTANCE-RATED ASSEMBLIES^{2,3}

Framing Members			Interior Sheathing			Exterior Sheathing			Insulation Board Thickness Maximum (inches)
Min. Depth (inches)	Min. Gage	Max. Spacing (inches)	Type	Min. Thickness (inch)	Max. Fastener Spacing (inches)	Type	Min. Thickness (inch)	Max. Fastener Spacing (inches)	
3 ⁵ / ₈	20	16 o.c.	Type X Gypsum Wallboard ¹	5/8	8 o.c.	C1177 ¹	5/8	8 o.c.	

For SI: 1 inch = 25.4 mm.

¹Fasteners are No. 6 x 1¹/₄ inch buglehead screws.

²Coating system is the Parex Standard WaterMaster system described in Table 1.

³Rated from both sides.