PAREX®

SECTION 07 24 00 – Insulation & Finish System
07 25 19- Fire Blocked Water-Drainage Exterior Insulation and Finish System

SYSTEM OVERVIEW

This overview does not form part of the specification.

The Standard WaterMaster™ FB EIFS is distinguished by installation with fire blocking consisting of strips of mineral wool insulation board within and around expanded polystyrene insulation board. Drainage is accomplished by means of channels formed by vertical ribbons of adhesive applied to the back of the insulation board. The insulation board is applied to Parex Weatherseal Spray & Roll-on™ water resistive barrier coating and is covered by fiberglass reinforced base coat and a textured, colored finish coat.

Parex® Standard WaterMaster FB is qualified for use in combustible and noncombustible construction, fire-resistance rated walls and residential and non-residential construction, of any height.

Acceptable substrates are glass mat gypsum sheathing, concrete, and concrete masonry. Concrete masonry requires 2 coats of Weatherseal Spray & Roll-on.

- The fire blocking is mineral wool in 8” wide strips the thickness of the adjoining EPS. Locations of the fire blocking are specified herein.
- Some jurisdictions may require special inspections of the Weatherseal Spray & Roll-on application.
- The system does not contribute structural strength to the wall. It depends on the substrate wall for support and attachment.
- Substrate construction must resist all design loads. Sheathing attachment to framing must resist design negative wind loads because it transfers those loads to the framing. Appropriate safety factors must be applied.
- All penetrations and non-draining terminations of the system must be made weather-tight, typically by sealants and/or flashings.
- The EPS in EIFS has a maximum service temperature of 165F (74C). Dark colors will increase the surface temperature of the EIFS wall.

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Manufacturer’s requirements for the proper design, use, and installation of an Exterior Insulation and Finish System.

1.2 RELATED SECTIONS

A. Section 03 30 00 - Cast-in-Place Concrete

B. Section 04 20 00 - Unit Masonry

C. Section 06 16 00 - Sheathing

D. Section 07 62 00 - Sheet Metal Flashing and Trim

E. Section 07 90 00 - Joint Protection

F. Section 08 50 00 - Windows

G. Section 09 21 16 - Gypsum Board Assemblies

1.3 REFERENCES

A. ASTM B117 Test Method for Salt Spray (Fog) Testing

B. ASTM C1135 Test Method for Determining Tensile Adhesion Properties of Structural Sealants

C. ASTM D968 Standard Test Methods for Abrasion Resistance of Organic Coatings by Falling Abrasive

D. ASTM D2247 Practice for Testing Water Resistance of Coatings in 100 Percent Relative Humidity

E. ASTM D2794 Standard Test Method for Resistance of Organic Coatings to the Effects of Rapid Deformation (Impact)

F. ASTM D3273 Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber

G. ASTM E84 Test Method for Surface Burning Characteristics of Building Materials.

H. ASTM E119 Standard Test Method for Fire Tests of Building Construction and Materials.

I. ASTM E283 Standard Test Method for Determining rate of Air Leakage Through Exterior Windows, Curtains Walls, and Doors Under Specified Pressure Difference Across the Specimen

J. ASTM E330 Test Method for Structural Performance by Uniform Static Air Pressure Difference.

K. ASTM E331 Test Method for Water Penetration by Uniform Static Air Pressure Difference.

L. ASTM E2134 Standard Test Method for Evaluating the Tensile-Adhesion Performance of an Exterior Insulation and Finish System (EIFS)

M. ASTM E2178 Standard Test Method for Air Permeance of Building Materials

N. ASTM E2273 Standard Test Method for Determining the Drainage Efficiency of Exterior Insulation and Finish Systems (EIFS) Clad Wall Assemblies

O. ASTM E2430 Standard Specification for Expanded Polystyrene (“EPS”) Thermal Insulation Boards for Use in Exterior Insulation and Finish Systems (“EIFS”)

P. ASTM E2485 Standard Test Method for Freeze/Thaw Resistance of Exterior Insulation and Finish Systems (EIFS) and Water Resistive Barrier Coatings

Q. ASTM E2486 Standard Test Method for Impact Resistance of Class PB and PI Exterior Insulation and Finish Systems (EIFS)

R. ASTM E2568 Standard Specifications for Exterior Insulation and Finish Systems

S. ASTM E2570 Standard Test Methods for Evaluating Water-Resistive Barrier (WRB) Coatings Used under Exterior Insulation and Finish Systems (EIFS) or EIFS with Drainage

T. ASTM G155/ G153 Accelerated Weathering for Exposure of Nonmetallic Materials.

U. MIL STD 810B Military Standard, Environmental Test Methods

V. NFPA 259 Test Method for Potential Heat of Building Materials.

W. NFPA 268 Standard Test Method for Determining Ignitability of Exterior Wall Assemblies Using a Radiant Heat Energy Source.

X. N FPA 285 Standard Method of Test for the Evaluation of Flammability characteristics of Exterior Non-load-bearing Wall Assemblies Containing Combustible Components Using the Intermediate-scale, Multistory Test Apparatus.

1.4 ASSEMBLY DESCRIPTION

A. Standard WaterMaster FB (fire blocking) system consisting of fluid applied water-resistive barrier, adhesive, mineral wool fire blocking, expanded polystyrene insulation (EPS) board, base coat with embedded reinforcing mesh fabric, primer (optional), and a textured, colored finish coat. The system is applied over glass mat gypsum sheathing, concrete or concrete masonry.

B. Functional Criteria:

1. General:

a. Locate fire blocking:

1. Around at all wall openings.
2. At the floor slab level for a height of not less than 8 inches (203 mm).
3. Between different occupancy groups, vertically or horizontally as applicable.
4. At maximum intervals of 20 feet (6096 mm) so that there will be no open space exceeding 100 square feet (9.3 m2).
5. At vertical and horizontal terminations of the System.
6. At each side of expansion joints.

Fire blocking section ends shall be tightly butted to form gapless continuous blocking.

Fire blocking locations shall be depicted on the project drawings by the project designer.

b. At all system terminations, install Parex DrainEdge at lower terminations of the system and encapsulate the fire blocking strip edge at the system termination in mesh reinforced base coat, substrate, or drainage track (Track is limited to terminations at foundation). Mesh and base coat may be installed on the fire blocking by pre-wrapping prior to installing the fire blocking.

c. Within the areas defined by the fire blocking at the system perimeter and by the specified intermittent fire blocking, the EPS insulation is installed. The use of and maximum thickness of insulation shall be in accordance with applicable building codes and EIFS manufacturer's requirements.

d. Flashing: Flashing shall be continuous and watertight. Flashing shall be designed and installed to prevent water infiltration behind the cladding. Refer to Division 07 Flashing Section for specified flashing materials.

e. The configuration of the water resistive barrier, drainage plane, flashing, and other Parex materials, as installed, must allow for the egress of incidental moisture.

f. Contact Parex Technical Department for allowable design wind loads.

g. Inclined surfaces shall follow the guidelines listed below:
   (1) Minimum slope: 6 in (152 mm) of vertical rise in 12 in (305 mm) of horizontal run.
   (2) For sloped surfaces, run of slope shall be a maximum of 12 in (305 mm).
   (3) Usage not meeting above criteria shall be approved in writing prior to installation.

h. The building interior shall be separated from the insulation board by 1/2 in (12.7 mm) of gypsum board or equivalent 15-minute thermal barrier.

2. Performance Requirements
   a. System to meet the performance and testing requirements of the International Code Council Acceptance Criteria AC 235.
   b. Shall meet the testing requirements of the Product Performance Sheet.
3. Substrate Systems:
   a. Shall be engineered to withstand applicable design loads including required safety factor.
   b. Maximum deflection of substrate system under positive or negative design loads shall not exceed L/240 of span.
   c. Substrate dimensional tolerance: Flat within 1/4 in (6.4 mm) in any 4 ft (122 cm) radius.
   d. Surface irregularities: Sheathing not over 1/8 in (3 mm); masonry not over 3/16 in (4.8 mm).

EDITOR NOTE: COORDINATE BELOW IMPACT RESISTANCE CLASSIFICATION REQUIREMENTS ACCORDING TO ASTM E2486 - STANDARD TEST METHOD FOR IMPACT RESISTANCE OF CLASS PB AND PI EXTERIOR INSULATION AND FINISH SYSTEMS (EIFS)

4. Impact Resistance Classification:
   a. Standard Impact Resistance, 25-49 in-lbs (2.8 – 5.6 J) Impact Range
   b. Medium Impact Resistance, 50-89 in-lbs (5.7–10.1 J) Impact Range
   c. High Impact Resistance, 90-150 in-lbs (10.2–17.0 J) Impact Range
   d. Ultra-High Impact Resistance, >150 in-lbs (> 17.0 J) Impact Range
5. Expansion Joints: Continuous expansion joints shall be installed at the following locations in accordance with manufacturer's recommendations:
   a. At building expansion joints.
   b. At substrate expansion joints.
   c. At floor lines in wood frame construction.
   d. Where CI system panels abut one another.
   e. Where CI system abuts other materials.
   f. Where significant structural movement occurs, such as at
      (1) Changes in roof line.
      (2) Changes in building shape and/or structural system.
   g. Where substrate changes

EDITOR NOTE: INDICATE JOINT WIDTH ON DRAWINGS FOR MOVEMENT AND EXPANSION AND CONTRACTION CONDITIONS. CONSULT WITH SEALANT MANUFACTURER FOR JOINT DESIGN RECOMMENDATIONS AND WITH CI SYSTEM MANUFACTURER FOR COORDINATION OF CI SYSTEM MATERIALS.

   h. Substrate movement and expansion and contraction of CI system and adjacent materials shall be taken into account in design of expansion joints, with proper consideration given to sealant properties, installation conditions, temperature range, coefficients of expansion of materials, joint width to depth ratios, and other material factors. Minimum width of expansion joints shall be as follows:
      (1) 1/2 in (12.7 mm) where CI system abuts other materials.
      (2) 3/4 in (19 mm) when CI system abuts the CI system.
      (3) Larger width where indicated on drawings.
6. Manufacturer's Detail:
   a. CI system latest published information shall be followed for standard detail treatments.
   b. Non-standard detail treatments shall be as recommended by manufacturer, approved by Project Designer and be part of the Contract Documents.
7. Building Code Conformance: CI system shall be acceptable for use on this project under building code having authority having jurisdiction.

1.5 SUBMITTALS

A. General: Submit Samples, Evaluation Reports, warranties, and Certificates in accordance with Division 01 General Requirements Submittal Section.

1.6 QUALITY ASSURANCE

A. Products manufactured under a Quality System approved and audited by the ICC Evaluation Service.

B. Qualifications:
   1. All WaterMaster FB assembly materials must be manufactured or sold by a single-source manufacturer and must be purchased direct from the manufacturer or its authorized distributor.

   2. Applicator:

a. Must possess a current manufacturer's listed applicator certificate.

b. Must be experienced and competent in installation of plaster-like materials.

C. Regulatory Requirements:

1. EPS insulation board: Shall be produced and labeled under a third-party quality program as required by applicable building code.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Delivery: Deliver materials in original packaging with manufacturer's identification.

B. Storage: Store materials in a cool, dry location, out of sunlight, protected from weather and other harmful environment, and at a temperature above 40°F (4°C) and below 110°F (43°C) in accordance with manufacturer's instructions.

1.8 PROJECT / SITE CONDITIONS

A. Installation Ambient Air Temperature: Minimum of 40°F (4°C) and rising and remain so for 24 hours thereafter.

B. Substrate Temperature: Do not apply materials to substrates whose temperature are below 40°F (4°C) or contain frost or ice.

C. Inclement Weather: Do not apply materials during inclement weather unless appropriate protection is employed.

D. Sunlight Exposure: Avoid, when possible, installation of the materials in direct sunlight. Application of Acrylic Finishes in direct sunlight in hot weather may adversely affect aesthetics.

E. Materials shall not be applied if ambient temperature exceeds 120°F (49°C) or falls below 40°F (4°C) within 24 hours of application. Protect materials from uneven and excessive evaporation during hot, dry weather.

F. Prior to installation, the substrate shall be inspected for surface contamination, or other defects that may adversely affect the performance of the materials and shall be free of residual moisture.

1.9 COORDINATION AND SCHEDULING:

A. Coordination: Coordinate water-resistive membrane & air barrier coating materials installation with other construction operations.

1.10 WARRANTY

A. Warranty: Upon request, at completion of installation, provide manufacturer's Standard Limited Warranty.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturer, Basis of Design: Parex Standard Watermaster FB EIFS by Sika Corporation, 201 Polito Ave, Lyndhurst, NJ 07071,

Technical Service: bf.technicalservices@us.sika.com (800.226.2424).

B. Components: Obtain components from authorized distributors. No substitutions or additions of other materials are permitted without prior written permission from the CI system manufacturer for this project.

2.2 MATERIALS

A. Water-Resistive Barrier Coating:

1. Parex WeatherSeal Spray & Roll-on™ water resistive barrier coating complying with the requirements of ICC-ES AC212.

2. Parex 396 Sheathing Tape: Non-woven synthetic fiber tape to reinforce Parex WeatherSeal Spray & Roll-on water-resistive barrier at sheathing board joints, into rough openings and other terminations into dissimilar materials available in 4 in, 6 in and 9 in.

3. Parex WeatherFlash: Liquid flashing and joint filler used to prepare and seal exterior wall rough openings and detail joints complying with AAMA 714.
4. Parex 365 Flashing Membrane: Pressure sensitive adhesive and synthetic fabric faced designed to be bonded to by bond Parex WeatherSeal, WeatherFlash, and Parex adhesives.

B. Adhesives : (Select from the following)

1. Parex 121™ Base Coat & Adhesive: 100% acrylic polymer based, requiring the addition of Portland cement; used as an adhesive to laminate EPS Insulation Board to the Parex WeatherSeal Spray & Roll-on water-resistive barrier.
2. Parex 121 Dry Base Coat & Adhesive: Copolymer based, factory blend of cement and proprietary ingredients; requiring the addition of water only, used as an adhesive to laminate EPS Insulation Board to the Parex WeatherSeal Spray & Roll-on water-resistive barrier.

C. Fire blocking: Rockwool Frontrock™ dual density mineral wool, 8-in. wide, in the thickness of the adjoining EPS insulation board, complying with ASTM C612 – Type IVA.

1. Insulation Board: Type I EPS complying with ASTM C578, flame spread index not over 25 and smoke developed index not over 450 as measured by ASTM E84
2. Produced and labeled under a third-party quality program as required by applicable building code; and produced by a manufacturer approved by Parex.
3. Shall conform to ASTM C578 and ASTM E2430, Type I and the Parex specification for Molded Expanded Polystyrene Insulation board.
4. Maximum size shall be 2 ft x 4 ft (610 mm x 1219 mm).
5. Thickness: ¾ in, minimum (19 mm) after rasping.

D. Base Coats: (Select from the following)

1. 121 Base Coat: 100% acrylic polymer base, requiring the addition of Portland cement.
2. 121 Dry Base Coat: Copolymer based, factory blend of cement and proprietary ingredients requiring addition of water.
3. 121 Dry HI: High Impact basecoat & adhesive. Copolymer based, blend of cement and proprietary ingredients, requires the addition of water. See data sheet for improved impact performance when 121 Dry HI is used with Parex mesh.

EDITOR NOTE: RETAIN BELOW STANDARD MESH FOR STANDARD SYSTEM FOR STANDARD IMPACT RESISTANCE CLASSIFICATION.

E. Reinforcing Mesh:

1. 355 Standard Mesh: Weight 4.5 oz. per sq. yd. (153 g/sq m); coated for protection against alkali. Standard reinforcement of Parex CI systems or for use with High Impact 358.14 Mesh, or Ultra High Impact 358.20 Mesh.
2. 356 Short Detail Mesh: Reinforcing mesh used for backwrapping, details, and over joints of 358.10 mesh.

EDITOR NOTE: RETAIN BELOW MESH REQUIREMENTS AFTER DETERMINATION OF IMPACT RESISTANCE CLASSIFICATION.

3. 358.10 Intermediate Impact 10 Mesh: Weight 12 oz per sq. yd. (407 g/sq m) Reinforcing mesh used with a Standard System, to achieve ASTM E2486 intermediate impact strength.
4. 358.14 High Impact 14 Mesh: Weight 15 oz. per sq. yd. (509 g/sq m) Reinforcing mesh used with a Standard System; to achieve ASTM E2486 high impact strength.
5. 358.20 Ultra High Impact 20 Mesh: Weight 20 oz. per sq. yd. (678 g/sq m) Reinforcing mesh used with a Standard System; to achieve ultra-high impact strength.

EDITOR NOTE: RETAIN BELOW AND SPECIFY LOCATIONS TO RECEIVE CI SYSTEMS WITH HIGHER THAN STANDARD IMPACT RESISTANCE CLASSIFICATION.

Locations : _____; ASTM E2486 Impact Classification : _____

F. Primer:

1. Parex Acrylic Primer: 100% acrylic based coating to prepare surfaces for acrylic or elastomeric finishes.

EDITOR NOTE: MODIFY BELOW TO SUIT REQUIREMENTS. CHOOSE ONE FINISH TYPE, TEXTURE, & COLOR

G. Finish

1. Parex DPR Standard Finish: Factory blended, 100% acrylic polymer-based finish, integrally colored. Finish type, texture and color as selected by Project Designer

2.3 RELATED MATERIALS AND ACCESSORIES

A. Substrate Materials:

1. Glass mat gypsum sheathing conforming to ASTM C1177.
2. Concrete Masonry: Non-painted (uncoated), made without water-repellent.
3. Concrete (poured or pre-cast).
4. Other approved by manufacturer writing prior to the project.

B. Flashing: Refer to Division 07 Flashing Section for flashing materials.

C. Sealant System:

1. Sealant for expansion joints between panelized EIFS sections shall be ultra-low modulus designed for minimum 100% elongation and minimum 50% compression and as selected by Project Designer.
2. Sealant for perimeter seals around window and door frames and other wall penetrations shall be low modulus, designed for minimum 50% elongation and minimum 25% compression, and as selected by Project Designer.
3. Sealants shall conform to ASTM C 920, Grade NS.
4. Expansion joints between sections of CI system shall have a minimum width of 3/4 in (19 mm).
5. Perimeter seal joints shall be a minimum width of 1/2 in (12.7 mm).
6. Sealant backer rod shall be closed-cell polyethylene foam.
7. Apply sealant to tracks or base coat of CI system.
8. Refer to CI system manufacturer's current bulletin for listing of sealants which have been evaluated and have been found to be compatible with EIFS materials.
9. Color shall be as selected by Project Designer.
10. Joint design, surface preparation, and sealant primer shall be based on sealant manufacturer's recommendations and project conditions.

EDITOR NOTE: PART 3 EXECUTION BELOW INVOLVES ONSITE WORK AND SHOULD INCLUDE PROVISIONS FOR INCORPORATING MATERIALS AND PRODUCTS INTO PROJECT. TYPICALLY, "CONDITIONS OF THE CONTRACT" ESTABLISH RESPONSIBILITY FOR "MEANS, METHODS, TECHNIQUES, AND SAFETY" REQUIREMENTS OF CONSTRUCTION WITH CONTRACTOR. SPECIFICATIONS SHOULD AVOID CONFLICTS WITH THIS CONTRACTUAL PRINCIPLE.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify project site conditions under provisions of Section 01 00 00.

B. Compliance: Comply with manufacturer's instructions for installation.

C. Substrate Examination: Examine prior to installation of CI system assembly materials as follows:

1. Substrate shall be of a type approved by manufacturer.
2. Substrate shall be examined for soundness, and other harmful conditions.
3. Substrate shall be free of dust, dirt, laitance, efflorescence, and other harmful contaminants.
4. Substrate construction in accordance with substrate material manufacturer's specifications and applicable building codes.
5. Maximum deflection of the substrate shall be limited to L/240.

D. Sealants and Backer Rod: To be installed, where required, in accordance with the sealant manufacturer's specifications and published literature and using the sealant manufacturer's recommended primers.

E. Advise Contractor of discrepancies preventing proper installation of the CI system materials. Do not proceed with the work until unsatisfactory conditions are corrected.

3.2 PREPARATION

A. Protection: Protect surrounding material surfaces and areas during installation of system.

B. Clean surfaces thoroughly prior to installation.

C. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 MIXING

A. Mix materials in accordance with manufacturer's instructions.

3.4 APPLICATION

A. General: Installation shall conform to this specification and manufacturer’s written instructions.

B. Drainage Accessories and Water Resistive Barrier

1. Install drainage tracks (limited to terminations at foundations), back-wrap mesh, or edge-wrap mesh at system terminations. Treat all glass mat gypsum sheathing joints with Parex WeatherSeal Spray & Roll-on water-resistive barrier and embed Parex 396 Sheathing Tape.
2. Flash all rough openings with either Parex WeatherSeal Spray & Roll-On with Parex Sheathing Tape embedded at rough opening edges and corners, Parex WeatherFlash, or Parex Flashing Membrane.
3. Apply Parex WeatherSeal Spray & Roll-on Water-resistive barrier to the surface of the appropriate substrate (in accordance with product data sheet).
4. Treat the heads of all windows, door, and similar openings with Parex DrainEdge and back-wrap mesh to allow for drainage at these locations.

C. Fire blocking: Install fire blocking in accordance with the Sika Building Façades Fire blocking Installation Technical Bulletin.

D. Insulation Board

1. Apply Parex adhesive to backs of insulation boards with a Parex drainage notched trowel, with ribbons of adhesive oriented in a vertical direction (parallel to the 2 ft (61 mm)) dimension of the EPS board). Apply a 1 in (25.4 mm) wide horizontal ribbon of adhesive on the back at the lower edge of insulation boards installed over Parex DrainEdge.
2. Install insulation board without gaps in a running bond pattern and interlocked at corners.
3. Rasp irregularities off insulation board.

E. Apply base coat and fully embed mesh in base coat; include diagonal mesh patches at corners of openings and reinforcing mesh patches at joints of track sections. Apply multiple layers of base coat and mesh where required for specified impact resistance classification.

F. Apply primer to base coat after drying. Primer may be omitted if it is not required by the manufacturer's product data sheets for the specified finish coat or otherwise specified for the project.

G. Finish Coat: Apply finish coat to match specified finish type, texture, and color. Do not apply finish coat to surfaces to receive sealant. Keep finish out of sealant joint gaps.

3.5 CLEAN-UP

A. Removal: Remove and legally dispose of CI system materials from job site.

B. Clean surfaces and work area of foreign materials resulting from material installation.

3.6 PROTECTION

A. Provide protection of installed materials from water infiltration into or behind them.

B. Provide protection of installed materials from dust, dirt, precipitation, and freezing during installation, and continuous high humidity until fully cured and dry.

C. Clean exposed surfaces using materials and methods recommended by the manufacturer of the material or product being cleaned. Remove and replace work that cannot be cleaned to the satisfaction of the Project Designer/Owner.

END OF SECTION

Disclaimer: This guide specification is intended for use by a qualified designer. The guide specification is not intended to be used verbatim as an actual specification without appropriate modifications for the specific use intended. The guide specification must be integrated into and coordinated with the procedures of each design firm, and the requirements of a specific project. For additional assistance, contact Technical Services bf.technicalservices@us.sika.com *(800-226-2424).*

EIFS Fire Performance	Method	ICC or ASTM Criteria	Results
Surface Burning Characteristics	ASTM E84	Individual components shall each have a flame spread <25, and smoke developed < 450	Flame Spread: 0 to 15 Smoke Developed: 0 to 15
Fire Resistance	ASTM E119	Maintain fire resistance of existing rated assembly	See Current ICC Report
Radiant Heat Exposure	NFPA 268	No ignition @ 20 minutes	Pass
Intermediate Scale Multi-Story Fire Test	NFPA 285(UBC Standard 26-9)	Required for Non-combustible Construction	Pass, See Current ICC Report

EIFS Strength	Method	ICC or ASTM Criteria	Results
Gardner Impact Test	ASTM D2794	No Requirement	25 to 200 in-lbs (mesh weight)
Transverse Wind Load	ASTM E330	Withstand positive and negative wind loads as specified	See Current ICC Report
Tensile Bond Strength	ASTM E2134	Minimum 15 psi (103kPa)	Pass

EIFS Environmental Durability	Method	ICC or ASTM Criteria	Results
Abrasion Resistance	ASTM D 968	No cracking or loss of film at 528 quarts (500 L) of sand	Pass @ 500 Liters
Accelerated Weathering	ASTM G153 (ASTM G 23) ASTM G154	No deleterious effects* at 2000 hours when viewed under 5x magnification	2000 Hours: no deleterious effect 2000 Hours: no deleterious effect
Drainage Efficiency	ASTM E2273		Pass
Fungus Resistance	MIL STD 810B		28 days: no growth

EIFS Environmental Durability	Method	ICC or ASTM Criteria	Results
Freeze/Thaw Resistance	ASTM E 2485	No deleterious effects* at 10 cycles when viewed under 5x magnification	60 cycles: no deleterious effect
Mildew Resistance	ASTM D 3273	No growth supported during 28-day exposure period	Pass

Water Penetration	ASTM E 331	No water penetration beyond the plane of the base coat/EPS board interface after 15 minutes at 6.24 psf (299 Pa)	Pass
Moisture Resistance	ASTM D2247	No deleterious effects at 14-day exposure	Pass
Salt Fog Resistance	ASTM B117	No deleterious effects* at 300 hours	500 hours: no deterioration

**No deleterious effects: no cracking, checking, crazing, erosion, rusting, blistering.*

Parex Weatherseal Spray & Roll-on	Method	ICC and ASTM E2570 Criteria	Results
Accelerated Weathering	AC 212	25 Cycles followed by Hydrostatic Pressure Test: No water penetration on the plane of the exterior facing side of the substrate.	Pass: no water penetration
Air Infiltration	ASTM E2178	Calculated flow Rate at 75 Pa (1.57 lb/ft^2, 0.3 in H_2O) = < 0.02 L/m^2*s (< 0.004 cfm/ft^2)	< .00001 L/m^2*s (0.00001 cfm/ft^2) at 75 Pa (1.57 lb/ft^2, 0.3 in H_2O)
Air Leakage of Air Barrier Assemblies	ASTM E2357	Pass < 0.2 L / s·m2 at 75 Pa) (< 0.04 cfm / ft2 at 1.57 psf)	Pass
Air Leakage	ASTM E283	No Criteria	< 0.004 cfm/ft^2
Elongation	ASTM D412	No Criteria	360%
Flexibility	ASTM D522	No Criteria	No Cracking at 1/8" (3 mm) minus 40°
Freeze-Thaw Resistance	ASTM E 2485	10 Cycles	Pass – No Deleterious Effects
Hydrostatic Pressure Test	AATCC 127 (Water Column)	Resist 21.6 in (55 cm) water for 5 hours before and after aging	Pass: no water penetration
Nail Seal ability, Head of Water	ASTM D1970	No Criteria	Pass 5 inches of water
Evaluation of Fire Propagation	NFPA 285	In Accordance with IBC Chapter 26	Meets requirements for use on all Types of construction
Radiant heat exposure	NFPA 268	In Accordance with IBC Chapter 26	No ignition upon 20-minute radiant heat exposure at 1.25 w/cm2.
Pull off Strength	ASTM D 4541	No Water Penetration	Pass - no water penetration

Parex Weatherseal Spray & Roll-on	Method	ICC and ASTM E2570 Criteria	Results
Racking	ASTM E72	Deflection at 1/8 in (3.2 mm)	Pass -No cracking at field, joints or flashing connection
Structural Loading	ASTM E1233 Procedure A	10 Cycles @ 80% design load	Pass -No cracking at field, joints or flashing connection

Restrained Environmental	ICC ES AC 212 / ASTM E2570	5 Cycles of wetting and drying	Pass -No cracking at field, joints or flashing connection
Surface Burning Characteristics	ASTM E84	ICC and ASTM E2568 Flame Spread <25 Smoke Developed <450	Flame Spread =0 Smoke Developed =0
Tensile Bond Strength	ASTM E 2134/ ASTM C 297	Minimum 15 psi (104 kPa)	Pass all listed substrates and flashing materials
Water Resistance	ASTM D 2247	14 Days	Pass – No Deleterious Effects.
Water Penetration	ASTM E331	2.86 psf (137 Pa) for 15 minutes	Pass 25.4 psf (1216 Pa) for 165 minutes
Water Penetration	ASTM E331	Tested after Structural Loading, Racking and Restrained Environmental Cycling at 2.86 psf (137 Pa) for 15 minutes	No Water Penetration
Water vapor transmission	ASTM E96 Procedure B	Vapor Permeable	12.0 perms
Weathering	ICC ES AC 212 / ASTM E2570	210 hours of UV Exposure, 25 cycles of accelerated weathering, 21.6 in (549 mm) water column for 5 hours	Pass
VOC	EPA Reference Test Method 24	US EPA, South Coast AQMD and Greenseal Standard	10 g/L

REINFORCING MESH IMPACT RESISTANCE	Classification	Impact Range (in-lbs)
355 Standard Mesh	Standard	25-49
358.10 Intermediate Impact 10 Mesh	Intermediate	50-89
358.14 High Impact 15 Mesh (Plus Standard Mesh)	High	90-150
358.20 Ultra High Impact 20 Mesh /Standard Mesh	Ultra High	>150

Where several tests on different materials are summarized, a range of values is shown. This summary has been prepared to provide quick but partial information on how certain combinations of Parex products perform during certain tests. It is not a complete description of the test procedures or of the results thereof. Copies of original test reports are available at no charge upon request. Please contact Technical Service bf.technicalservices@us.sika.com *(800-226-2424) if further information is required.*