CSI SECTION 07 25 00 – Weather Barriers
CSI SECTION 07 27 26 – Fluid Applied Membrane Air Barriers / Trowel Applied

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Manufacturer's requirements for the proper design, use, and installation of Parex WeatherSeal WG a 100% acrylic based, trowel applied water-resistive membrane and air barrier coating.

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 D522	Standard Test Methods for Mandrel Bend Test of Attached Organic Coatings
D.	ASTM D2247	Practice for Testing Water Resistance of Coatings in 100 Percent Relative Humidity
E.	ASTM D4541	Test Method for Pull-Off Strength of Coatings Using Portable Adhesion Testers
F.	ASTM E72	Test Methods of Conducting Strength Tests of Panels for Building Construction
G.	ASTM E84	Test Method for Surface Burning Characteristics of Building Materials
H.	ASTM E96	Test Method for Water Vapor Transmission of Materials
I.	ASTM E283	Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen
J.	ASTM E331	Test Method for Water Penetration by Uniform Static Air Pressure Difference
K.	ASTM E695	Method for Measuring Relative Resistance to Impact Loading
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 E2485	Standard Test Method for Freeze/Thaw Resistance of Exterior Insulation and Finish Systems (EIFS) and Water Resistive Barrier Coatings
O.	ASTM G155/ G153	Accelerated Weathering for Exposure of Nonmetallic Materials
P.	NFPA 268	Standard Test Method for Determining Ignitability of Exterior Wall Assemblies Using a Radiant Heat Energy Source
Q.	NFPA 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. Parex WeatherSeal Trowel On WG: 100% acrylic based trowelable water-resistive membrane and air barrier coating. Designed for use as water-resistive barrier and air barrier behind EIFS and other claddings. This product is installed over glass mat gypsum sheathing, cement board sheathing, CDX plywood, OSB*, concrete or CMU. **The system is qualified for application to OSB (oriented strand board) sheathing only in areas shown in the Pare Acceptable Substrates and areas of use Technical Bulletin.*

B. Functional Criteria:

1. General:

   a. 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.

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

2. Performance Requirements:

   a. System to meet the performance and testing requirements of the International Code Council Acceptance Criteria AC 212 and ASTM E 2570.

Test	**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
Freeze-Thaw Resistance	ASTM E 2485	10 Cycles	Pass – No Deleterious Effects
Hydrostatic Pressure Test	AATCC 127 (Water Column)	Resist 21.6 in (55cm) water for 5 hours before and after aging	Pass: no water penetration
Elongation	ASTM D412	No Criteria	360%
Flexibility	ASTM D522	No Criteria	No Cracking at 1/8” (3 mm)

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.
Racking	ASTM E72	Deflection at 1/8 in (3.2mm)	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
Structural Loading	ASTM E1233 Procedure A	10 Cycles @ 80% design load	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 Stainless Steel, Color Coated Aluminum, Galvanized Metal, Copper, Aluminum, Rigid PVC, Parex Flashing Membrane
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 perms

Weathering	ICC ES AC 212 / ASTM E2570	210 hours of UV Exposure, 25 cycles of accelerated weathering, 21.6 in (549mm) water column for 5 hours	Pass
Wind Driven Rain	F.S. TT-C-555B	No Criteria	Pass
VOC	EPA Reference Test Method 24	US EPA, South Coast AQMD and Greenseal Standard	10 g/L

1.5 SUBMITTALS

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

1.6 QUALITY ASSURANCE

A. Qualifications:

1. All materials must be manufactured or sold by Parex and must be purchased from Parex or its authorized distributor.
2. Applicator:
    a. Shall have attended manufacturer's Educational Seminar.
    b. Shall possess a current manufacturer's certificate of education.
    c. Shall be experienced and competent in installation of plaster-like materials and liquid-applied weather-resistive membranes.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Delivery: Deliver water-resistive membrane & air barrier coating 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. 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.

E. Prior to installation, the wall 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 Weather Seal Trowel WG On manufactured by Sika Corp.

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

2.2 MATERIALS

A. Water-resistive Membrane & Air Barrier Coating:

1. Parex WeatherSeal Trowel On WG: 100% acrylic, non-cementitious, trowelable air & water-resistive barrier.

   SikaWall 9000 Sheathing Tape: Non-woven synthetic fiber tape to reinforce the membrane at sheathing board joints, into rough openings and other terminations into dissimilar materials.
2. SikWall 85 Flashseal NP Flashing Membrane: Self-sealing, polyester faced, rubberized asphalt membrane, 20 mil thick.

2.3 RELATED MATERIALS AND ACCESSORIES

A. Substrate Materials:

1. Glass mat gypsum sheathing conforming to ASTM C 1177.
2. Cement Fiber Sheathing conforming to ASTM C 1186.
3. Gypsum Sheathing: Minimum 1/2" (13mm) thick, core-treated, weather-resistant, exterior gypsum sheathing complying with ASTM C 79.
4. Plywood: Minimum 7/16" (8mm) thick exterior grade or PS 1, Exposure 1, minimum 7/16" thick, C veneer facing out, panels gapped 1/8 " at all edges.
5. Oriented Strand Board (OSB): 7/16" - 1/2" Wall-16 or Wall-24, approved by the APA, TECO, or PSI/PTL. Stamped as Exposure 1 or Exterior Sheathing with a PS2 or PRP-108 rating.
6. Concrete Masonry Units (CMU): Non-painted (uncoated).
7. Concrete (poured or pre-cast).
8. Other approved by manufacturer writing prior to the project.

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

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 water-resistive membrane & air barrier coating materials as follows:

1. Substrate shall be of a type approved by manufacturer. Plywood and OSB substrates shall be gapped 1/8 in (3.2mm) at all edges. Plywood and OSB substrates cut edges (non-factory edges) must be sealed with water-resistive membrane & air barrier coating material.
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 determined by the requirements of the exterior cladding.

D. Flashing: Flashing must be installed prior to the water-resistive membrane & air barrier coating material and integrated with the wall field membrane to create positive drainage.

E. Advise Contractor of discrepancies preventing proper installation of the water-resistive membrane & air barrier coating material. 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 water-resistive membrane & air barrier materials in accordance with manufacturer's instructions.

3.4 APPLICATION

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

1. Flash all rough openings with water-resistive membrane & air barrier coating material embedded with SikaWall 9000 sheathing tape or polyester backed peel and stick flashing membrane.
2. Treat all sheathing joints with water-resistive membrane & air barrier coating material and embed 4” SikaWall 9000 sheathing tape.
3. Embed Sikawall 9000 Sheathing Joint tape by applying water-resistive membrane and air barrier coating. Trowel-On per application instruction to 4 in. of each side of the joint and embed reinforcing fabric with a stainless-steel trowel so that the color of the fabric is not visible.
4. Apply water-resistive membrane & air barrier coating to the entire surface of the substrate with a stainless-steel trowel to a minimum wet thickness of 1.6mm (1/16 inch).
5. Ensure that the water-resistive membrane & air barrier coating laps onto all tracks and flashing to allow for any incidental moisture to be drained into the track/flashing.
6. Allow water-resistive membrane & air barrier coating to completely dry before proceeding with additional layers of the assembly
7. Ensure that the water-resistive membrane & air barrier coating material laps onto all tracks and flashing to allow for any water to be drained into the tracks/flashing.
8. Allow material to completely dry before proceeding with additional layers of the assembly.

3.5 CLEAN-UP

A. Removal: Remove and legally dispose of water-resistive membrane & air barrier coating material 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

WARRANTY

Prior to each use of any product of Sika Corporation, its subsidiaries or affiliates ("SIKA"), the user must always read and follow the warnings and instructions on the product's most current product label, Product Data Sheet and Safety Data Sheet which are available at usa.sika.com/Parex or by calling SIKA Facades' Technical Service Department at 1-800-226-2424. Nothing contained in any SIKA literature or materials relieves the user of the obligation to read and follow the warnings and instructions for each SIKA product as set forth in the current product label, Product Data Sheet and Safety Data Sheet prior to use of the SIKA product.

SIKA warrants this product for one year from date of installation to be free from manufacturing defects and to meet the technical properties on the current Product Data Sheet if used as directed within the product's shelf life. User determines suitability of product for intended use and assumes all risks. User's and/or buyer's sole remedy shall be limited to the purchase price or replacement of this product exclusive of any labor costs. NO OTHER WARRANTIES EXPRESS OR IMPLIED SHALL APPLY INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SIKA SHALL NOT BE LIABLE UNDER ANY LEGAL THEORY FOR SPECIAL OR CONSEQUENTIAL DAMAGES. SIKA SHALL NOT BE RESPONSIBLE FOR THE USE OF THIS PRODUCT IN A MANNER TO INFRINGE ON ANY PATENT OR ANY OTHER INTELLECTUAL PROPERTY RIGHTS HELD BY OTHERS. Sale of SIKA products are subject to the Terms and Conditions of Sale which are available at https://usa.sika.com/.