PAREX®

Standard EXTRA System Specification

Expanded language

CSI SECTION 07 24 00

CSI SECTION 07 24 00 - Exterior Insulation & Finish System (EIFS) - Class PB
(Parex, EIFS Standard EXTRA Class PB)

SYSTEM OVERVIEW

The Standard Extra System is a Class PB EIF System distinguished by application over a weather-barrier coating. Parex Standard System is qualified for use on:

- noncombustible construction
- combustible non-residential construction
- fire resistance rated walls

This system is not qualified for use on wood-frame residential construction, including multi-unit. (Refer to Parex Water Master with StuccoWrap™ and Grade D building paper for wood-frame residential construction.)

- The system is not qualified for application to OSB (oriented strand board) sheathing.
- Some jurisdictions may require special inspections.
- The system does not contribute structural strenght 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 windloads because it transfers those loads to the framing. Appropriate safety factors must be applied.
- All penetrations and terminations of the system must be made weather-tight, typically by sealants and/or flashings.

PART 1 - GENERAL

1.01 SUMMARY

A. Section Description: Section includes exterior insulation and finish system (EIFS - Class PB).

B. Products Installed But Not Supplied Under This Section:

1. EIFS Joint Sealant: Refer to Division 7 Joint Treatment (Sealants) Section. Installation of EIFS Joint Sealant shall be by EIFS applicator or a separate installer under direct supervision and control of EIFS applicator. EIFS Joint Sealant installer shall be experienced and competent in the installation of elastomeric construction sealants.

1.02 SYSTEM DESCRIPTION

EDITOR NOTE: MODIFY BELOW IF PAREX STANDARD EXTRA EIF SYSTEM WITH ACRYLIC BASE COAT IS USED FOR PROJECT.

A. Description of Parex EIFS Standard EXTRA:

1. Parex EIFS Standard EXTRA System with Cementitious Base Coat: An Exterior Insulation and Finish System (EIFS) consisting of Expanded Polystyrene Insulation (EPS) Board, Non-cementitious Adhesive, Cementitious Base Coat with embedded Reinforcing Fabric Mesh, Primer (Optional), and Finish Coat. This system is installed over a secondary weather barrier consisting of Parex KeyCoat Liquid Membrane Adhesive and Parex Flashing Membrane applied over Georgia Pacific Dens Glass® Gold Sheathing, exterior gypsum sheathing and cement board.

B. Parex EIF System Functional Criteria:

1. General:
   a. Insulation Board: At system termination, completely encapsulate insulation board edges by mesh reinforced base coat, substrate or Parex track. The use of and maximum thickness of insulation board shall be in accordance with applicable building codes and Parex requirements.
   b. Flashing: Flashing shall be continuous and watertight. Primary flashing shall be designed and installed to prevent water infiltration behind the EIFS. Refer to Division 7 Flashing Section for specified flashing materials.
2. Substrate Systems:
   a. Shall be engineered to withstand applicable design loads including required safety factor.
   b. Maximum deflection under positive or negative design loads of substrate system shall not exceed 1/240 of span except as otherwise approved in writing by Parex prior to installation.

c. Substrate Dimensional Tolerances: Flat within 1/4 inch (6.4 mm) within any 4 foot (1219 mm) radius.

d. Surface irregularities: Sheathing not over 1/8" (3 mm); masonry not over 3/16" (4.8 mm).

e. EPS board shall be separated from the interior of the building by 1/2" (12.7 mm) gypsum board or equivalent approved 15 minute thermal barrier.

EDITOR NOTE: COORDINATE BELOW IMPACT RESISTANCE CLASSIFICATION REQUIREMENTS RECOMMENDED BY EIMA INDUSTRY MEMBERS ASSOCIATION TEST METHOD AND STANDARD 101.86 - "STANDARD TEST METHOD FOR RESISTANCE OF EXTERIOR INSULATION FINISH SYSTEMS TO THE EFFECTS OF RAPID DEFORMATION (IMPACT)."

3. Impact Resistance Classification: Parex EIFS Standard EXTRA System shall be classified in accordance with EIMA for EIFS classification and impact ranges as follows:

a. Standard Impact Resistance, 25-49 inch-lbs Impact Range.

4. 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 Parex EIF System panels abut one another.

e. Where Parex EIF 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. (For exceptions to joints at substrate changes, contact the Parex Technical Department)

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

h. Substrate movement and expansion and contraction of Parex EIF 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 inch where EIFS abuts other materials.

2) 3/4 inch when EIFS abuts the EIFS.

3) Larger width where indicated on drawings.

5. Manufacturer's Details:

a. Parex EIFS System latest published information shall be followed for standard detail treatments.

b. Non-standard detail treatments shall be as recommended by Parex, approved by Architect and be part of the Contract Documents.

6. Building Code Conformance: Parex EIF System shall be acceptable for use on this project under building code having jurisdiction.

1.03 SUBMITTALS

A. General: Submit Samples, Reports, Certificates and Manufacturer's Warranty in accordance with Division 1 General Requirements Submittal Section.

1.04 QUALITY ASSURANCE

A. Qualifications:

1. EIFS Manufacturer: Shall have marketed Exterior Insulation and Finish Systems in United States for at least ten years; at least 1,000 projects shall have been completed utilizing this exterior insulation and finish systems; Shall have completed projects of same building size and type as this project.

2. EIFS Applicator: Shall have attended a Parex Educational Seminar for installation of system; Shall possess a current certificate of education; Shall be experienced and competent in installation of plaster-like materials.

B. Regulatory Requirements:

1. Insulation Board: Shall be produced and labeled under a third party quality program as required by applicable building code.

1.05 DELIVERY, STORAGE AND HANDLING

A. Delivery: Deliver EIFS and secondary weather barrier materials supplied by Parex to site location in original unopened containers with labels intact. Upon arrival, materials shall be inspected for damage, and manufacturer notified of any discrepancies. Unsatisfactory materials shall not be used.

B. Storage: Store materials supplied by Parex in a cool, dry location, out of sunlight, protected from weather and other harmful environment, and at a temperature above 40 degrees F and below 110 degrees F in accordance with manufacturer's instructions. Store insulation board flat.

1.06 PROJECT / SITE CONDITIONS

A. General: Provide access to electric power and clean potable water at area where Parex EIFS System materials are installed.

B. Environmental Conditions: Comply with manufacturer's recommendations of environmental conditions affecting product performance:

1. Ambient air temperature: Minimum 40 degrees F and rising, and remaining so for 24 hours thereafter.
2. Do not apply Parex EIFS System or secondary weather barrier materials to substrates whose temperature is below 40 degrees F.
3. Do not apply Parex EIFS System or secondary weather barrier during inclement weather unless appropriate protection is employed.
4. Protect Parex EIFS System or secondary weather barrier materials from weather and other damage.

1.07 WARRANTY

A. Warranty: Upon request, at completion of installation, provide Parex Standard Extra System Limited Warranty.

1.08 MAINTENANCE

A. Maintenance Instructions: At completion of EIFS installation, provide manufacturer's maintenance instructions for EIFS installed.

1. Refer to Division 1 General Requirements for requirements for submitting maintenance documentation.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

A. Manufacturer: Parex, P.O. Box 189, Redan, GA 30074

1. System: Parex Exterior Insulation & Finish System (EIFS) Standard EXTRA System.
   a. Secondary Weather Barrier:
      1) Parex KeyCoat Liquid Membrane Adhesive other Parex approved weather barrier.
      2) Parex Sheathing Tape 396
      3) Parex Flashing Membrane 365
   b. Adhesive: Select Parex KeyCoat Liquid Membrane Adhesive or appropriate adhesive for substrate type
   c. Insulation Board: In compliance with manufacturer’s requirements for Standard System EIFS.
   d. Base Coat: Base Coat 121, 121 Dry, 121 XL (cementitious) or ABC-N1 Base Coat and Adhesive 302.

EDITOR NOTE: COORDINATE BELOW WITH PROJECT REQUIREMENTS.

   e. Mesh Reinforcement: Locations to achieve impact strength shall be as follows:
      1) Locations (Not Otherwise Noted): EIMA Impact Classification: Standard.

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

      2) Locations: _____ ; EIMA Impact Classification: _____

EDITOR NOTE: CONSULT WITH PAREX AND COORDINATE BELOW TRACKS, SEAL TAPE AND BACKWRAPPING WITH REQUIREMENTS FOR PROJECT CONDITIONS.

   f. Track: Vented Track 363, as required for EIFS.
   g. Seal Tape: Seal Tape 360.
2. Parex System Finish:

EDITOR NOTE: SPECIFY BELOW TYPES FROM MANUFACTURER'S TEXTURE FINISHES AND COLORS. REFER TO PAREX PRODUCT BINDER FOR FINISH TYPE, TEXTURE AND COLOR SELECTION.

a. Type: _____

b. Texture: _____

c. Color: _____

3. Product Performance Requirements: Refer to Product Performance Sheet as attached herein.

B. MATERIALS

1. Secondary Weather Barrier:

a. Parex KeyCoat Liquid Membrane Adhesive: Vapor permeable trowel-applied flexible coating for Georgia Pacific Dens Glass® Gold or cement fiber sheathing to provide a secondary weather barrier and adhesive.

b. Parex Base Coat/ Adhesive 121, 121 Dry, or 121 XL for exterior grade gypsum sheathing.

c. Parex Sheathing Tape 396: Non-woven synthetic fiber tape to reinforce liquid membrane at sheathing board joints.

d. Parex Flashing Membrane 365: Self-sealing, non-woven mat- rubberized asphalt membrane, 30 mils (0.76 mm) thick.

2. EIFS Insulation Board: Expanded Polystyrene (EPS) Insulation Board:

a. Produced by and labeled under a third party quality program as required by applicable building code; and produced by a manufacturer approved by Parex.

b. Shall conform to ASTM C-578, Type I and the Parex specification for Molded Expanded Polystyrene Insulation board.

c. Maximum size shall be 2' x 4'.

d. Thickness: 3/4", minimum.

3. Adhesive:

a. Parex KeyCoat Liquid Membrane Adhesive: Secondary Weather Resistive Barrier and adhesive for bonding Parex Insulation board to Georgia-Pacific Dens Glass Gold or cement based sheathing.

b. Sheathing Adhesive 303: 100% acrylic polymer based; ready to use, applied without the addition of cement; used as an adhesive to laminate EPS Insulation Board to appropriate substrates.

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

4. Parex Reinforcing Mesh:

a. Standard Mesh 355: Weight 4.5 oz. per sq. yd (153 g/m2); coated for protection against alkali. Standard reinforcement of Parex EIFS, or for use with High Impact 14 Mesh, or Ultra High Impact 20 Mesh.

b. Short Detail Mesh 356: Reinforcing mesh used for backwrapping and details.

c. Self Adhesive Detail Mesh 352: Reinforcing mesh used for complex details.

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

d. Intermediate Impact 10 Mesh 358.10: Weight 10 oz per sq. yd. (339 g/ m2). Reinforcing mesh used with Parex EIFS Standard System, to achieve EIMA intermediate impact strength.

e. High Impact 14 Mesh 358.14: Weight 14 oz. per sq. yd. (475 g/ m2). Reinforcing mesh used with Parex EIFS Standard System; to achieve EIMA high impact strength.

f. Ultra High Impact 20 Mesh 358.20: Weight 20 oz. per sq. yd. (678 g/ m2) Reinforcing mesh used with Parex EIFS Standard Extra System; to achieve ultra-high impact strength.

g. Corner Mesh 357: Reinforcing mesh used as a corner reinforcement; required with Ultra-High Impact 20 Mesh.

5. Parex Base Coat:

a. Base Coat 121: 100% acrylic polymer base, requiring the addition of portland cement.

b. Base Coat 121 Dry: Copolymer based, factory blend of cement and proprietary ingredients.

c. Base Coat 121 XL: Copolymer based, factory blend of cement and proprietary ingredients.

d. ABC-N1 Base Coat and Adhesive 302: 100% acrylic polymer base; ready to use, applied without the addition of cement.

6. Parex Primers:

a. Primer 310: 100% acrylic based coating to prepare surfaces for Parex finishes.

b. Sanded Primer 313: 100% acrylic based coating to prepare surface for Parex Cerastone finish.

7. Parex Finish Coat: Factory blended, 100% acrylic polymer based acrylic finish, integrally colored. Finish type, texture and color as selected by Architect.

8. Parex Vinyl Track: PVC plastic accessory, used for termination of Parex EIFS in lieu of backwrapping; provides straight termination and joint lines; facilitate sealant maintenance; Vented Track 363 as required for EIFS.
9. Parex Seal Tape 360: Self-adhering pre-compressed expanding tape for forming a weather seal.
10. Water: Clean, potable water.
11. Portland Cement: ASTM C 150, Type I.

2.02 RELATED MATERIALS

A. Sheathing:
1. Dens Glass® Gold glass mat faced gypsum sheathing conforming to ASTM C1177, as manufactured by Georgia Pacific.
2. Cement Fiber Sheathing conforming to ASTM C 1186.
3. Exterior grade gypsum sheathing conforming to ASTM C 79.

B. Flashing: Refer to Division 7 Flashing Section for flashing materials.

C. Sealant System:
1. Sealant for expansion joints between panelized Parex EIFS System sections shall be ultra-low modulus designed for minimum 100% elongation and minimum 50% compression and as selected by Architect.
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 Architect.
3. Sealants shall conform to ASTM C 920, Grade NS.
4. Expansion joints between sections of Parex EIF System shall have a minimum width of 3/4 inch.
5. Perimeter seal joints shall be a minimum width of 1/2 inch.
6. Sealant backer rod shall be closed-cell polyethylene foam.
7. Apply sealant to tracks or base coat of Parex EIF System.
8. Refer to Parex current bulletin for listing of sealants which have been tested and have been found to be compatible with Parex EIF Systems.
9. Color shall be as selected by Architect.
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

3.01 MANUFACTURER'S INSTRUCTIONS

A. Compliance: Comply with manufacturer's instructions for installation of exterior insulation & finish system.

REMINDER: PAREX EIFS STANDARD EXTRA SYSTEM IS A WEATHER BARRIER TYPE OF SYSTEM. SYSTEM PERFORMANCE IS DEPENDENT UPON, AMONG OTHER FACTORS, IMPORTANCE OF PROPER FLASHING AND JOINT SEALING, AND ATTENTION TO PROPER FLASHING AND JOINT SEALANT DETAILS INDICATED ON DRAWINGS.

3.02 EXAMINATION

A. Examination of Substrate:
1. Prior to installation of Parex EIF System, examine substrate as follows:
   a. Substrate shall be of a type approved by Parex.
   b. Substrate shall be examined for soundness, such as tightness of connections, crumbling or looseness of surface, voids and projections, spacing of panels, and other conditions.
   c. Substrate shall be examined for dimensional tolerances per this specification.
   d. Substrate surface shall be free of foreign materials such as oil, dust, dirt, form release agents, paint, wax, water, frost, and other harmful materials.
2. Advise Contractor of discrepancies preventing installation of a manufacturer's warranty EIFS. Do not proceed with EIFS work until unsatisfactory conditions are corrected.
3. Correction of unsatisfactory conditions of substrates installed by other trades shall be responsibility of Contractor.

PAREX®

3.03 PROTECTION AND COORDINATION

A. Protection: Protect surrounding material surfaces and areas during installation of Parex EIF System. Protect Parex EIF System from weather and other damage immediately after installation and until installation of sealants and flashing.

B. Coordination:

1. Coordinate installation of Parex EIF System with other construction trades.
2. Ensure a continuous EIFS operation, free of cold joints, scaffolding lines, texture variations, and other non-complying installation procedures.
3. Promptly flash and/or seal system terminations to prevent water infiltration. Use temporary cover when permanent flashing or sealant installation is delayed.
4. Immediately cover tops of walls to prevent water infiltration.
5. Upon full cure of Parex EIF System, promptly install sealant to surfaces to be sealed.

3.04 INSTALLATION

A. General: Installation shall conform to this specification and Parex EIFS written instructions and drawing details.

1. Install tracks, back-wrap mesh, or edge-wrap mesh at system terminations. Treat all sheathing joints with KeyCoat Liquid Membrane Adhesive and embed Parex Sheathing Tape 396.
2. Apply KeyCoat Liquid Membrane Adhesive to surface of the appropriate substrate and flash all rough openings with Flashing Membrane 365. If using KeyCoat as the adhesive too, immediately install the insulation board into wet KeyCoat in accordance with step 4.
3. If another adhesive is to be used, apply adhesive to backs of insulation boards with a Parex notched trowel with ribbons of adhesive oriented in a vertical direction.
4. Install insulation board without gaps in a running bond pattern and interlocked at corners.
5. Rasp irregularities off insulation board.
6. 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.
7. 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.
8. Finish Coat: Apply finish coat to match specified finish type, texture, and color.
9. Install sealant in accordance with Parex details and instructions. Apply sealant to base coat.

3.05 CLEANUP

A. General: Remove excess and waste EIFS materials from job site.

1. Clean EIFS surfaces and work area of foreign materials resulting from EIFS operations.

END OF SECTION

Standard EXTRA System Specifications

Expanded language

PRODUCT PERFORMANCE SHEET PAREX STANDARD EXTRA SYSTEM

FIRE PERFORMANCE

TEST	METHOD	STANDARD EXTRA SYSTEM
Full-Scale Multi-Story Fire Evaluation	UBC. 26-4	Pass
Surface Burning Characteristics of Coatings	ASTM E 84	Flame Spread: 0 to 15, Smoke Developed: 0 to 15
Large-Scale Vertical Fire Spread	Modified ASTM E 108	No vertical or horizontal flame spread. Prevented fire involvement of insulation core.
Fire Resistance	ASTM E 119 1, 2, & 3 hour assembly	Type PB System: Standard fire-resistive assembly rating maintained.
Radiant Heat Exposure	NFPA 268	Pass: 1" to 4" EPS

STRENGTH

TEST	METHOD	STANDARD EXTRA SYSTEM
Transverse Wind Load Resistance	ASTM E 330	Negative Wind Load: 150 psf. No failure of system. Failure in gypsum sheathing substrate.
Impact Load	ASTM E 695	30 lb. impact mass; no cracking of system, 4.8 mm dent dept.
Gardner Impact Test	ASTM D 2794	25 to 200 in. lb. (depends on mesh weight)
Falling Ball Impact	ASTM D 1037	92 to over 600 in. lb.
Tensile Bond Strength	ASTM C 297	26 psi (179 kPa) to insulation board
Creep Resistance of Adhesive	ASTM D 2294	28 days 208 psf shear stress; no creep
Flexural Strength	ASTM C 203	60.6 psi (418 kPa)

ENVIRONMENTAL DURABILITY

TEST	METHOD	STANDARD EXTRA SYSTEM
Accelerated Weathering	ASTM G 23, ASTM G 53	2000 hours: no deleterious effect 2000 hours: no deleterious effect
Wind-Driven Rain	F.S. TT-C-555B	24 hours: no penetration of water
Water Penetration EIMA 101.02	ASTM E 331	Pass
Freeze-Thaw Resistance EIMA 101.01	ASTM C 67 UBC Acceptance Criterion	60 cycles: no deterioration 10 cycles: pass
Salt Fog Resistance	ASTM B 117	500 hours: no deterioration
Moisture Resistance	ASTM D 2247	14 days: no deleterious effect
Abrasion Resistance	ASTM D 968	500 liters: no deleterious effect
Fungus Resistance	MIL STD 810B	28 days: no growth
Mildew Resistance	ASTM D 3273	35 days: no growth
TEST	METHOD	LIQUID MEMBRANE ADHESIVE 395A
Water vapor transmission	ASTM E 96	8.4 U.S. perms
Water Penetration EIMA 101.01	ASTM E 331	Pass
Water resilience	F.S. TT-C-555B	Pass
Moisture Resistance	ASTM D 2247	14 days: no deleterious effect
Air Leakage	ASTM E 283	0.8 cubic feet per minute
Freeze-Thaw	EIMA Method (60 cycles)	Pass, No visible effect
Tensile Bond Strength to Dens Glass® Gold	ASTM C 297	26 psi (179 kPa)
Tensile Bond Strength to Dens Glass Gold® after 60 Freeze-Thaw cycles	ASTM C 297	17 psi (117 kPa)
Elongation	ASTM D 412	14%

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. Parex will mail copies of original test reports at no charge on request. Please contact Parex if further information is required.

PAREX®

Standard EXTRA System Specificitions

Expanded language

PAREX®

800-537-2739
1870 Stone Mountain-Lithonia Road
Redan, GA 30074

800-780-6953
11290 S. Vallejo Court
French Camp, CA 95231

800-358-4785
220 Burleson
San Antonio, TX 78202

www.parex.com