

**PAREX®**

# Fiber-47™ Specification

Expanded language

**CSI SECTION 09 20 00**

**PAREX®**

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# **PAREX®** Fiber-47™ Specification

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## **CSI SECTION 09 20 00**

SECTION 09 22 00: PORTLAND CEMENT STUCCO, Fiber 47 THREE COAT STUCCO with ACRYLIC BASED STUCCO FINISH and OPTIONAL EPS FORMED SHAPES

### **PART 1—GENERAL**

#### **1.01 DESCRIPTION OF WORK**

- A. The extent of stucco basecoat systems is indicated on the drawings.
- B. The types of stucco basecoat systems include:
  - 1. Pre-mixed, fiber-reinforced portland cement stucco base coat concentrate for jobsite mixing with sand to provide scratch and brown coats to receive acrylic based exterior wall finish coat system.

#### **1.02 DESIGN REQUIREMENTS**

- A. Wall lateral deflection limit shall be L/360.
- B. Wood based sheathing panels shall be gapped 1/8" (3 mm) at all edges.

#### **1.03 RELATED WORK SPECIFIED ELSEWHERE**

- A. Sheathing Section: \_\_\_\_\_
- B. Light gage Metal Framing: Section: \_\_\_\_\_
- C. Wood Framing: Section: \_\_\_\_\_
- D. C.M.U. Construction: Section: \_\_\_\_\_

#### **1.04 QUALITY ASSURANCE**

- A. Requirements of Regulatory Agencies: Install stucco base coat system to comply with all applicable codes and standards and with requirements of local agencies having jurisdiction.
- B. Applicator Qualifications: Applicators specializing in the installation of exterior stucco systems with a minimum of 5 years experience in work similar to that required by this section.
- C. Allowable Tolerances: Maximum deviation from true plane of 1/4" (6.4 mm) in 8' (2440 mm) as measured by straight edge placed at any location on surface.
- D. Job Mock-up, including Finish Coat System
  - 1. 4'x 4' (1220 mm x 1220 mm) sample panel of same material on same substrates as for project.
  - 2. Show color, texture and workmanship of finished work.
- E. Single Source Responsibility:
  - 1. All stucco base and finish coat material shall be from a single manufacturing source.

#### **1.05 SUBMITTALS**

- A. Manufacturer's technical information and product data sheet.
- B. Evaluation report for EIFS shapes applied.

#### **1.06 PRODUCT DELIVERY, STORAGE AND HANDLING**

- A. Deliver manufactured materials in original unopened packages or a container, with manufacturer's labels intact and legible.
- B. Keep materials dry, stored off ground, under cover and away from damp surfaces.
- C. Remove wet or deteriorated materials from site.

#### **1.07 JOB CONDITIONS**

- A. Environmental Requirements (Cold Weather):
  - 1. Do not use frozen materials in cement stucco.
  - 2. Do not apply cement stucco to frozen surfaces or surfaces containing frost.
  - 3. Do not apply cement stucco when ambient temperature is forecast to be less than 40° F (4° C) within a 24 hour period following applications.



- B. Environmental Requirements (Hot Weather):
  - 1. Protect cement stucco from uneven and excessive evaporation during hot, dry weather.
  - 2. Do not apply cement stucco when ambient temperature is above 100° F (38° C).
- C. Protection:
  - 1. Protect finish surfaces installed prior to stucco work.
  - 2. Maintain protection in place until completion of work.
  - 3. Protect finished work when stopping for the day or when completing an area.

## **PART 2—PRODUCTS**

### **2.01 MANUFACTURER**

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

### **2.02 MATERIALS**

- A. Fiber-reinforced Portland cement stucco base
  - 1. Fiber-47 Concentrate: Manufacturer's standard pre-mixed stucco basecoats consisting of portland cement and alkali resistant fiberglass and acrylic fibers and proprietary ingredients. With additional sand requirements:
    - a. Jobsite added sand must be as required by ASTM C897 or ASTM C144.
    - b. Sand compliance certificates must be presented with each load of sand.
    - c. Independent third party sand testing may be required at the request of the Architect/Owner.
    - d. Sand must be placed on a protective surface and covered when not in use.
- B. Parex Adacryl: 100 percent acrylic emulsion additive for portland cement based products, to enhance curing, adhesion, freeze-thaw resistance and workability.
- C. Parex Bonding Agent: acrylic polymer based bonding agent for portland cement based products to increase shear bond adhesion.
- D. Parex Primers:
  - 1. Primer 310: 100% acrylic based coating to prepare surfaces for Parex finishes.
  - 2. Sanded Primer 313: 100% acrylic based coating to prepare surfaces for Parex finishes.
- E. Parex Finish:
  - 1. Parex e-lastic Finish: Factory blended, 100% acrylic polymer based elastomeric finish, integrally colored. Finish type, texture and color as selected by Architect.
  - 2. Parex Finish: Factory blended 100% acrylic polymer based finish, integrally colored. Finish type, texture and color as selected by Architect.

### **2.03 RELATED MATERIALS**

- A. Water-Resistive Barriers:
  - 1. For non-wood based sheathing shall be either:
    - a. 1 layer of Parex KeyGuard 495 with Parex Sheathing Tape 396 embedded at sheathing joints plus 1 layer of Grade D asphalt saturated Kraft building paper conforming to Federal Standard UU-B-790a or U.B.C. Standard No. 14-1 or other non-adhering recognized equivalent.
    - b. 1 layer Grade D asphalt saturated Kraft building paper as above.
    - c. 1 layer asphalt-saturated felt complying with ASTM D226 Type I
    - d. Other recognized equivalent.
  - 2. For wood based sheathing shall be either:
    - a. 1 layer of Parex KeyGuard 495 with Parex Sheathing Tape 396 embedded at sheathing joints plus 1 layer of asphalt saturated Kraft as above or other non-adhering recognized equivalent.
    - b. 2 layers of Grade D asphalt saturated Kraft building paper as above or recognized equivalent.
  - 3. For wood based sheathing with foam plastic insulation installed over the water-resistive barrier, shall be either:
    - a. 1 layer of Parex KeyGuard 495 with Parex Sheathing Tape 396 embedded at sheathing joints plus 1 layer of Grade D asphalt saturated Kraft building paper as above or other non-adhering recognized equivalent.
    - b. 1 layer of 60-minute moisture resistance rated Grade D asphalt saturated Kraft building paper as above or other recognized equivalent.
- B. Air Barrier (Optional):
  - 1. For all sheathing types, a combination air/water-resistive barrier shall be one layer of the Parex KeyGuard 495 roll-on barrier with Parex Sheathing Tape 396 embedded at joints plus one layer of non-adhering recognized water-resistive barrier.

- C. Metal Accessories: Manufacturer's standard steel products unless otherwise indicated as Zinc Alloy.
  - 1. Exterior components: Hot dip galvanized finish, minimum of a 17 Gauge Self-Furred Stucco Netting.
  - 2. Casing Beads: general-purpose type with expanded or perforated flanges.
  - 3. Cornerite: Manufacturer's standard pre-formed interior corner reinforcement made from 2.5 lbs./square yard of diamond mesh lath.
  - 4. Edged Corner Beads: expanded or flanged to suite application.
  - 5. No. 10x Bull Nose Corner Bead: For rounded corner reinforcement.
  - 6. Control Joints: No. XJ15-3 control joint with 1/4" slot, and 1" grounds, or equal for use at all locations as shown on drawings. Control joints must be wire tied to the lath and not nailed or screwed to substrate.
  - 7. Expansion Joints: No. 40 adjustable expansion joint, free floating with adjustments from 1/4" (6.4 mm) to 5/8" (15.9 mm).
  - 8. Fasteners: (CMU Applications) Galvanized steel of furring type and length suitable for at least 1/2" (13 mm) penetration of the brick or block substrate.
  - 9. Fasteners: (Steel or Wood Stud Applications) Furring nails and or screws, galvanized steel of type and length suitable for at least a 1/2" (13 mm) penetration of the stud system.
  - 10. Expanded metal lath: 3.4 lb for use around all windows, doorways, soffits, fascia, openings and parapets.
- D. Optional Expanded Polystyrene (EPS) Formed Shapes:
  - 1. Shall conform to ASTM C-578-87 type I, flame spread index 25 or less, smoke generated 450 or less as tested in accordance with ASTM E 84. Size, shape and thickness is as indicated on drawings or details.
  - 2. EPS formed shapes: Parex Standard System Exterior Insulation and Finish System.
- E. Optional Leveling and Reinforcing Coat
  - 1. Parex Base Coat & Adhesive 121: 100% acrylic polymer base, requiring the addition of portland cement.
  - 2. Parex Base Coat & Adhesive 121 Dry: Copolymer based, factory blend of cement and proprietary ingredients.
  - 3. Parex Base Coat & Adhesive 121 XL: Copolymer based, factory blend of cement and proprietary ingredients.
  - 4. Parex Standard Mesh 355: Weight 4.5 oz per sq. yd. (153 g/m<sup>2</sup>) coated for protection against alkali.
- F. Sand:
  - 1. Comply with all requirements of ASTM C 897.
- G. Water: Shall be cool, clean, potable and free of foreign matter.

## **2.04 MIXES**

- A. General:
  - 1. Accurately proportion materials for each stucco batch with measuring devices of known volume.
  - 2. Size batches for complete use within maximum of one hour after mixing.
  - 3. Re-temper stucco stiffened from evaporation, but do not use or re-temper partially hydrated cement stucco.
  - 4. Do not use frozen, caked or lumpy materials, and remove such materials from jobsite immediately.
  - 5. Mix factory prepared cement stucco in accordance with manufacturer's written instructions.
  - 6. Use moist, loose sand in proportions recommended by basecoat concentrate manufacturer.
  - 7. Withhold 10% of mixing water until mixing is nearly complete, then add as needed to produce desired working consistency.
- B. Mechanical Mixing:
  - 1. Clean mixer of set or hardened materials before loading new batch.
  - 2. Maintain mixer in continuous operation while adding materials.
  - 3. Conform to mixing sequence, cycle of operations, and time recommended by the manufacturer of the basecoat mix materials.
- C. Hand Mixing:
  - 1. Do not hand mix stucco basecoat system materials unless authorized by Architect/Engineer.
  - 2. Use waterproof mixing boxes and water barrels when mixing within building.
  - 3. Mix Parex Base Coat & Adhesive 121, 121 Dry and 121 XL following the mixing instructions printed on the pail or bag and also published in the Product Data Sheets.
  - 4. Water is to be added to the Parex Primers in accordance with the instructions printed on the pail and published in the Product Data Sheets.
  - 5. Add amount of water to the acrylic finish coats needed to achieve workability. To avoid color variations, add same amount of water to each pail of finish. No other admixtures are allowed.

## **PART 3—EXECUTION**

### **3.01 INSPECTION**

- A. Verify that surfaces to plaster are free of dust, loose particles, oil and other deleterious materials which would affect bond or proper hydration of cement stucco.
- B. Verify that lath is tight, properly secured and overlapped, and that all accessories are properly set and secured.
- C. Isolation: Where lathing and metal support system abuts building structure horizontally, and where partition wall work abuts the overhead structure, isolate work from structure movements. Install expansion joints to absorb deflections but maintain lateral support. Frame both sides of expansion and control joints separately and do not bridge joints with furring or lathing.
- D. Examine substrates, grounds and accessories to insure that finished stucco work will be true to line, plane, level and plumb.
- E. Verify that masonry and concrete surfaces to receive direct bond applications of stucco base coats are rough, free from form release agents or otherwise properly prepared to provide for adequate bond with base coat system.
- F. Installer notify General Contractor and Architect/Engineer in writing of any conditions detrimental to proper and successful installation of stucco system. Do not proceed with installation until unsatisfactory conditions are corrected to satisfaction of Architect/Engineer and installer.

### **3.02 APPLICATION**

- A. General:
  - 1. Apply stucco base coat in accordance with manufacturer's instructions and recommendations, and in compliance with requirements of applicable codes, regulations and agencies having jurisdiction.
  - 2. Interrupt or delay stucco application only at junctions of stucco planes, at openings, or at control joints.
- B. Scratch Coat:
  - 1. Apply scratch coat to a minimum thickness of 3/8", using sufficient trowel pressure to key stucco into lath or to create bond to substrates as applicable.
  - 2. Prior to initial set, scratch horizontally to provide key for bond of brown coat.
- C. Brown Coat:
  - 1. Apply brown coat to a minimum thickness of 3/8", using sufficient trowel pressure to key stucco into scratch coat.
  - 2. Rod surface to true plane.
  - 3. Trowel to smooth and uniform surface to receive acrylic polymer finish coat.
  - 4. Tool brown coat to provide a V-joint at intersection of stucco with frames or items of metal, wood, or plastic.
- D. Optional Leveling Coat
  - 1. Using a stainless steel trowel, apply the Parex Base Coat & Adhesive 121, 121 Dry or 121 XL over the brown coat at a thickness of 1/16 – 3/32 in. and trowel smooth.
- E. Optional Leveling and Reinforcing Coat
  - 1. Using a stainless steel trowel, apply the Parex Base Coat & Adhesive 121, 121 Dry or 121 XL over the brown coat at a thickness of 1/16 – 3/32 in.
  - 2. Bed the Parex Standard reinforcing mesh immediately into the wet base coat material with a trowel until the reinforcing mesh is fully embedded and the base coat thickness is approximately 1/16 inch.
  - 3. The color of the reinforcing mesh should not be visible at the surface of the base coat.
- F. Optional EPS-formed shapes
  - 1. Adhesively attach the shapes as noted on drawings with Parex Base Coat & Adhesive 121.
  - 2. Allow to fully cure.
  - 3. Apply Base Coat & Adhesive 121 material over the EPS and onto cement plaster brown coat a minimum of 2-1/2" (64 mm).
  - 4. While base coat material is still wet, embed Parex fiberglass mesh reinforcement and smooth flush with brown coat, taking care to completely embed fiberglass mesh into wet base coat and a minimum of 2-1/2" (64 mm) onto the brown coat.
- G. Finish Coat:
  - 1. Apply Parex primer by brush, roller, or spray according to manufacturers written instructions in order to achieve sufficient coverage as required.
  - 2. Apply finish coat to thickness recommended by manufacturer to achieve texture indicated and to match approved sample.

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### **3.03 CURING**

- A. Moist cure scratch coat with clean potable water in accordance with ASTM C 926 and/or building codes following initial application (unless brown coat is applied after the scratch coat has achieved sufficient rigidity to support the brown coat).
- B. Moist cure brown coat with clean potable water in accordance with ASTM C 926 and/or building codes.
- C. Allow brown coat to dry thoroughly to a pH of 9.5 or lower before applying acrylic primers or finish coats if the optional Leveling Coat or Leveling and Reinforcing Coat is not applied.
- D. If optional Leveling Coat or Leveling and Reinforcing Coat is applied, allow to cure for 24 hours before application of the Parex Primer and Parex finish. (Note: cementitious finishes are not recommended to be used over the optional Leveling Coat or Leveling and Reinforcing Coat.)
- E. Air cure acrylic based finish coats only, do not wet cure.

### **3.04 ADJUST AND CLEAN**

- A. Patching:
  - 1. Upon completion, point up exterior wall finish coat around trim and other locations where finish coat terminates or meets dissimilar materials.
  - 2. Cut out and replace defective or damaged exterior wall finish coat.
  - 3. Match pointing and patches to surrounding finish coat in form and texture.
- B. Cleaning:
  - 1. Remove exterior wall finish and protective materials from perimeter trim and adjacent surfaces.
  - 2. Remove all excess materials from the project site.
  - 3. Maintenance kit: Shall include enough materials to repair 100 square feet.
    - a. Containers of liquids shall remain un-opened.
    - b. All materials shall be stored properly.

### **END OF SECTION**

#### Obligatory Disclaimer Statement

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.