Parex ACF Surfacing System for Concrete and Masonry Units Section – 07 24 23 or 09 25 13 / 09 77 00

Weather resistant surfacing system using a base coat, optional reinforcing mesh and 100% acrylic polymer exterior finish.

INTRODUCTION

This specification refers to application of the Parex ACF Surfacing System over concrete, brick and concrete masonry units (CMU) walls.

DESIGN RESPONSIBILITY

It is the responsibility of both the specifier and the purchaser to determine if a product is suitable for its intended use. The designer selected by the purchaser shall be responsible for all decisions pertaining to design, detail, structural capability, attachment details, shop drawings and the like. The Parex® brand of Sika Corporation US (herein referred to as "Sika") has prepared guidelines in the form of specifications, typical application details, and product bulletins to facilitate the design process only. Sika is not liable for any errors or omissions in design, detail, structural capability, attachment details, shop drawings or the like, whether based upon the information provided by Sika or otherwise, or for any changes which the purchasers, specifiers, designers or their appointed representatives may make to Sika published comments.

DESIGNING AND DETAILING A PAREX SURFACING SYSTEM

General: The system shall be installed in strict accordance with current recommended published details and product specifications from the system's manufacturer.

A. Substrate Systems:

1. Acceptable substrates are Concrete Masonry Units (excluding fluted block; split faced block should be assessed on project-by-project basis) brick and concrete walls.
2. Painted and otherwise coated surfaces should be inspected and prepared as approved by Sika before application. The applicator shall verify that the proposed substrate is acceptable prior to the Parex Surfacing System installation.

B. System Joints

1. It is the sole responsibility of the project design team, including the architect, engineer, etc., to ultimately determine specific expansion joint placement, width and design. Detail specific locations in construction drawings.
2. Sealant joints are required at all penetrations through the Parex Surfacing System.
3. For a list of acceptable sealants refer to *Acceptable Sealants for use with Parex Wall Systems* technical bulletin.

C. Grade Condition: The Parex Surfacing System is not intended for use below grade or on surfaces subject to continuous or intermittent immersion in water or hydrostatic pressure.

TECHNICAL INFORMATION

Consult Sika Facades' Technical Services Department for specific recommendations concerning all other applications. Consult the Parex website, usa.sika.com/parex, for additional information about products, systems and for updated literature.

Parex ACF Surfacing System for Concrete and Masonry Units

PART 1 GENERAL

NOTE TO SPECIFIER: Items in blue/underlined indicate a system option or choice of options. Throughout the specification, delete those which are not required or utilized.

1.01 SECTION INCLUDES

A. Parex products are listed in this specification to establish a standard of quality. Any substitutions to this specification shall be submitted to and receive approval from the Architect at least 10 days before bidding. Proof of equality shall be borne by the submitter.

B. Parex Surfacing System: A surfacing system typically consisting of Parex base coat, Parex reinforcing mesh (optional) and Parex finish coat.

1.02 RELATED SECTIONS

A. Products installed, but not supplied under this section: substrate, flashing and sealant.

1.03 SUBMITTALS

A. Submit under provisions of Section [01 33 00] [x].

B. Product Data: Provide data on Parex ACF Surfacing System materials, product characteristics, performance criteria, limitations and durability.

C. Samples: Submit [two] [x] [millimeter] [inch] size samples of Parex Surfacing System illustrating finish coat [custom] color and texture range.

D. Certificate: System manufacturer's approval of applicator.

E. Sealant: Sealant manufacturer's certificate of compliance with ASTM C1382.

F. System manufacturer's current specifications, typical details, system overview and related product literature which indicate preparation required, storage, installation techniques, jointing requirements and finishing techniques.

1.04 QUALITY ASSURANCE

A. Manufacturer: More than 10 years in the industry, with more than 1000 completed projects.

B. Applicator: Approved by Sika in performing work of this section.

C. Regulatory Requirements: Conform to applicable code requirements resurfacing system.

D. Field Samples:

1. Provide under provisions of Section [01 43 36] [01 43 39].
2. Construct one field sample panel for each color and texture, [x] [meters] [feet] in size of system materials illustrating method of attachment, surface finish, color and texture.
3. Prepare each sample panel using the same tools and techniques to be used for the actual application.
4. Locate sample panel where directed.
5. Accepted sample panel [may] [may not] remain as part of the work.
6. Field samples shall be comprised of all wall assembly components including substrate Parex base coat, Parex reinforcing mesh, SikaWall primer (if specified), Parex finish coat, and typical sealant/flashing conditions.

E. Testing:

1. Surfacing System with Parex DPR Finish

TEST	METHOD	CRITERIA	RESULTS
Surface Burning	ASTM E84 / UL 723	Flame spread < 25 Smoke developed < 450	All components of the system meet Class A performance (FS < 25; SD < 450)
Water resistance of Coatings in 100% R.H.	ASTM D2247	No deleterious effects after 14 days	Pass
Freeze/Thaw Resistance	ASTM E2485	No deleterious effects at 10 cycles viewed under 5x magnification	Pass at 60 cycles
Salt Fog Resistance	ASTM B117	No change after 300 hours	Pass
Mildew Resistance	Mil. Std. 810B Method 508	No fungus growth after 28 days	Pass
Abrasion Resistance	ASTM D968	Finish Coat not worn through after 500 liters of falling sand	Pass after 686 liters of sand
Accelerated Weathering	ASTM G53	No deleterious effects after 7500 hours	Pass
Accelerated Weathering	ASTM G23	No deleterious effects after 2000 hours	Pass
Tensile Bond	ASTM C297,	Greater than 15 psi	Pass

	E2134		
Alkali Resistance of Reinforcing Mesh	ASTM E2098	Greater than 120 pli retained strength after exposure	All weights of meshes pass

2. Surfacing System with Parex DPR Finish

TEST	METHOD	CRITERIA	RESULTS
Surface Burning	ASTM E84 / UL 723	Flame spread < 25 Smoke developed < 450	All components of the system meet Class A performance (FS < 25; SD < 450)
Water resistance of Coatings in 100% R.H.	ASTM D2247	No deleterious effects after 14 days	Pass
Freeze/Thaw Resistance	ASTM E2485	No deleterious effects at 10 cycles viewed under 5x magnification	Pass at 60 cycles
Salt Fog Resistance	ASTM B117	No change after 300 hours	Pass
Mildew Resistance	Mil. Std. 810B Method 508	No fungus growth after 28 days	Pass
Abrasion Resistance	ASTM D968	Finish Coat not worn through after 500 liters of falling sand	Pass
Accelerated Weathering	ASTM G53	No deleterious effects after 7500 hours	Pass
Accelerated Weathering	ASTM G23	No deleterious effects after 2000 hours	Pass
Dirt Collection	ASTM D3719	61 days at 45° South exposure Dc Index = 99.0 (100 = Best Performance)	Pass
Dirt Pickup Resistance	Miami Dade County TAS 143-95 section 7.8 (modified)	Greater than 90% reflectance retained after dirt pickup	Pass
Tensile Bond	ASTM C297, E2134	Greater than 15 psi	Pass
Alkali Resistance of Reinforcing Mesh	ASTM E2098	Greater than 120 pli retained strength after exposure	All weights of meshes pass

1.05 DELIVERY, STORAGE AND HANDLING

A. Deliver, store and handle products under provisions of Section [01 65 00] [01 66 00] [ ].
B. Deliver Sika materials in original unopened packages with manufacturer's labels intact.
C. Protect Sika materials during transportation and installation to avoid physical damage.
D. Store Sika materials in a cool, dry place protected from freezing. Store at no less than 40°F/4°C (50°F/10°C Gratine & Stone finish).
E. Store Maxflash at a minimum of 40°F. In cold weather, keep containers at room temperature for at least 24 hours before using.
F. Store reinforcing mesh, Sikawall Sheathing Fabric and Sikawall Flash Seal Np flexible flashing in a cool, dry place protected from exposure to moisture.

1.06 PROJECT/SITE CONDITIONS

A. Do not apply Sika material in ambient temperatures below 40°F/4°C (50°F/10°C for GRATINE & STONE Finish). Provide properly vented, supplementary heat during installation and drying period when temperatures less than 40°F/4°C (50°F/10°C for GRATINE & STONE Finish) prevail. Do not apply in ambient temperature above 100°F (38°C) or surface temperature above 120°F (49°C).
B. Do not apply materials to frozen surfaces.
C. Maintain ambient temperature at or above 40°F/4°C (50°F/10°C for GRATINE & STONE Finish) during and at least 24 hours after material installation and until dry.
D. Under average conditions [70 °F (21 °C), 50% Relative Humidity] finish will be dry within 24 hours. Drying time is dependent on humidity, air temperature, sun exposure, surface conditions and finish thickness. Lower temperature, higher humidity and application in shaded areas will extend drying time. Protect finish from rain or other precipitation and temperatures less than 40°F (4°C) for a minimum of 24 hours or until dry.

1.07 SEQUENCING AND SCHEDULING

A. Coordinate and schedule installation of Parex ACF Surfacing System with related work of other sections.
B. Coordinate and schedule installation of trim, flashing, and joint sealers to prevent water infiltration behind the existing system.
C. Coordinate and schedule installation of windows, doors, A/C units, air seals etc. if being removed and replaced.

1.08 Warranty
A. Provide Sika standard warranty for Parex Surfacing System installations under provisions of Section [01 07 00].
B. Comply with Parex application instructions and notification procedures to assure qualification for warranty.

PART 2 - PRODUCTS
2.01 MANUFACTURERS
A. Parex Surfacing System manufactured by Sika Corporation US.

2.02 MATERIALS
(NOTE TO SPECIFIER: Items in blue/underlined indicate a system option or choice of options. Throughout the specification, delete those which are not required or utilized. Contact Sika Facades' Technical Service Department for further assistance.)
A. Sikawall Surface Stabilizer WB Adhesion Promoter (For painted, glazed or chalky surfaces): To prepare glazed or chalky, previously painted masonry surfaces that will receive a Parex Surfacing System.
B. Base Coats: ***(Required, Select One or More)***
1. Parex 121 Base Coat: A 100% acrylic based adhesive and base coat, field-mixed with Portland cement. It has a creamy texture that is easily spread.
2. Parex 121 Dry Base Coat: A dry-mix polymer adhesive and base coat containing Portland cement and requiring only water for mixing.
3. Parex Weather Dry Base Coat: A 100% acrylic-based, water-resistant adhesive and base coat, field-mixed with Portland cement.

NOTE TO SPECIFIER: Portland cement is not used with Parex Base Coats.
C. Portland cement: Conform to ASTM C150, Type I, IL (ASTM C595), II, or I/II, grey or white; fresh and free of lumps.
D. Water: Clean and potable without foreign matter.
E. Parex 355 Standard Reinforcing Mesh: (Required if patches or cracks are present) A 4 oz balanced, open-weave glass, fiber reinforcing mesh, twisted multi-end strands treated for compatibility with Parex base coats
F. Sikawall Tinted Primer (Optional): A 100% acrylic-based primer that helps alleviate shadowing and enhances the performance of Parex wall systems. Color to closely match the selected Parex finish coat.
G. Finish Coat: ***(Required, Select One or More Finishes and Textures)***
1. Parex DPR Finish: 100% acrylic polymer finishes with advanced technology to improve long-term performance and dirt pick-up resistance; air cured, compatible with base coat; Parex finish color [ ] as selected; finish texture:
   a. Swirl Fine: Has a medium "worm-holed" appearance which is achieved by the random aggregate sizes in the finish. The "worm-holed" look can be circular, random, vertical or horizontal.
   b. Sand Fine: utilizes uniformly sized aggregates for a uniform, fine texture.
   c. Sand Smooth: can achieve a wide variety of free-formed, textured appearances, including stipple and skip-trowel
   d. Sand Coarse : Provides a uniform, "pebble" appearance.
2. Parex Aquasol Finish: Modified acrylic-based finish with water repellent properties, compatible with base coat; Parex finish color [ ] as selected; finish texture:
   a. Swirl Fine: Has a medium "worm-holed" appearance which is achieved by the random aggregate sizes in the finish. The "worm-holed" look can be circular, random, vertical or horizontal.

   b. Sand Fine: utilizes uniformly sized aggregates for a uniform, fine texture.
   c. Sand Smooth : can achieve a wide variety of free-formed, textured appearances, including stipple and skip-trowel
   d. Sand Coarse : Provides a uniform, “pebble” appearance.
3. SikaWall Specialty Finishes: 100% acrylic polymer finishes that can be hand-troweled to simulate stone or create a time-honored, mottled tone-on-tone look that achieves a soft and weathered patina over time.
   a. Sikawall Metallic: Has a pearlescent appearance. It utilizes uniformly sized aggregates for a uniform fine texture.
   b. Sikawall Granite & Stone: Is a factory-mixed, reflective stone finish consisting of colored aggregate and large black mica flakes in a 100% acrylic transparent binder that provides a classic granite or marble-like textured finished appearance.
4. Sikawall Chroma Finish: 100% acrylic polymer-based finish with integrated high performance colorants for superior fade resistance, compatible with base coat; Parex finish color [ ] as selected; finish texture:
   a. F1.0: Utilizes uniformly sized aggregates for a uniformly fine texture.
   b. M1.5: Provides a uniform “pebble” appearance.
   c. R1.5: Has a medium “worm-holed” appearance which is achieved by the random aggregate sizes in the finish. The “worm-holed” look can be circular, random, vertical or horizontal.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Examine surfaces to receive Parex Surfacing System and verify that substrate and adjacent materials are dry, clean, cured, sound and free of releasing agents, paint, or other residue or coatings. Verify substrate surface is flat, free of fins or planar irregularities greater than 1/4" in 10' (6.4 mm in 3 m).

B. Ensure adhesion tests meet the requirements listed in the *Basics of Conducting Adhesion Testing Parex* technical bulletin.

C. Fill large voids and irregularities with appropriate parging or cement mortar materials. Parex 121 Base Coat can be applied at a maximum thickness of 1/4" (6.4 mm) to fill small voids and help level the surface. Other Parex base coats can be applied at a maximum thickness of 1/8" (3.2 mm), to fill small voids and help level the surface.

D. Control/Expansion joint type and placement shall be the responsibility of the architect/engineer and substrate manufacturer.

E. Unsatisfactory conditions shall be reported to the general contractor and corrected before application of the Parex Surfacing System.

3.02 PREPARATION

A. All surfaces to receive Parex Surfacing System components must be clean, dry and free of airborne contaminants.

B. Protect all surrounding areas and surfaces from damage and staining during application of Parex Surfacing System.

C. Protect finished work at end of each day to prevent water penetration.

3.03 MIXING

General: No additives are permitted unless specified in product mixing instructions. Close containers when not in use. Prepare in a container that is clean and free of foreign substances. Do not use a container which has contained or been cleaned with a petroleum-based product. Clean tools with soap and water immediately after use.

NOTE TO SPECIFIER: Keep only the products in this section which were selected in Section 2.02. Delete those not to be utilized.

A. Air/Water-Resistive Barriers: SENERSHIELD-R/RS/VB: Mix with a clean, rust-free paddle and drill until thoroughly blended. Do not add water.

B. SURFACE STABILIZER WB: Mix the contents of the pail with a low speed drill and clean paddle mixer until thoroughly blended.

C. Parex Base Coat:

1. Parex 121 Base Coat: Mix base coat with a clean, rust-free paddle and drill until thoroughly blended, before adding Portland cement. Mix one-part (by weight) Portland cement with one-part base coat. Add Portland cement in small increments, mixing until thoroughly blended after each additional increment. Clean, potable water may be added to adjust workability.
2. Parex Weather Dry Base Coat: Mix base coat with a clean, rust-free paddle and drill until thoroughly blended, before adding Portland cement. Mix one-part (by weight) Portland cement with one-part base coat. Add Portland cement in small increments, mixing until thoroughly blended after each additional increment. Clean, potable water may be added to adjust workability.
3. Parex 121 Dry Base Coat: Mix and prepare each bag in a 5-gallon (19-liter) pail. Fill the container with approximately 1.5-gallons (5.6-liters) of clean, potable water. Add base coat in small increments, mixing after each additional increment. Mix base coat and water with a clean, rust-free paddle and drill until thoroughly blended. Additional Parex 121 Dry Base Coat or water may be added to adjust workability.

D. Sikawall Tinted Primer: Mix the factory-prepared material with a clean, rust-free paddle and drill until thoroughly blended. A small amount of clean, potable water may be added to adjust workability. Do not overwater.

E. Finish:

1. Parex DPR, Parex Aquasol, and SikaWall Chroma Finish: Mix the factory-prepared material with a clean, rust-free paddle and drill until thoroughly blended. A small amount of clean, potable water may be added to adjust workability. Do not overwater.
2. Sikawall Granite & Stone Finish: Gently mix the contents of the pail for 1 minute using a low RPM ½" drill equipped with a mixing paddle such as a Demand Twister or a Wind-Lock B-MEW, B-M1 or B-M9.

3.04 APPLICATION

NOTE TO SPECIFIER: Keep only the products in this section which were selected in Section 2.02. Delete those not to be utilized.

A. Surface Stabilizer Wb: Apply evenly and uniformly over the entire wall surface. Surface shall be uniformly coated, free from voids, pinholes or blisters. Apply with a wide nylon bristle brush or 1/2" to 3/8" (6.4 to 9.5 mm) nap roller. Protect from rain and wash-off until the specified system is installed.

B. Parex Base Coat/ Optional Reinforcing Mesh: Base coat shall be applied to achieve reinforcing mesh embedment with no reinforcing mesh color visible.

1. Apply mixed Parex base coat to entire surface of the substrate with a stainless-steel trowel to provide a smooth level base for finish application.
   Note: Multiple layers of base coat may be required to completely level/cover mortar joints in CMU or brick applications
2. If reinforcing mesh is selected, immediately place FLEXGUARD 4 reinforcing mesh against wet base coat and embed the reinforcing mesh into the base coat by troweling from the center to the edges.
3. Lap reinforcing mesh 2-1/2" (64 mm) minimum at edges.
4. Ensure reinforcing mesh is continuous at corners, void of wrinkles and embedded in base coat so that no reinforcing mesh color is visible.
5. If required, apply a second layer of base coat to achieve total nominal base coat/reinforcing mesh thickness of 1/16" (1.6 mm).
6. Allow base coat with embedded reinforcing mesh to dry hard (normally 8 to 10 hours).

C. Sikawall Tinted Primer:

1. Apply primer to the base coat/reinforcing mesh with a sprayer, ⅜" (10 mm) nap roller, or good quality latex paint brush at a rate of approximately 150-250 ft² per gallon (3.6–6.1m² per liter). Primer shall be dry to the touch before proceeding to the Parex finish coat application.

D. Finish Coat: Parex DPR, Parex Aquasol and SikaWall Chroma.

1. Apply finish directly to the base coat with a clean, stainless-steel trowel.

2. Apply and level finish during the same operation to a minimum obtainable thickness consistent with uniform coverage. Maintain a wet edge on finish by applying and texturing continually over the wall surface.
3. Work finish to corners, joints or other natural breaks and do not allow material to set up within an uninterrupted wall area. Float finish to achieve final texture.

E. Sikawall Granite & Stone:

1. Apply Sikawall Tinted Primer to the substrate in accordance with the current product bulletin. Primer shall be of the corresponding color for the selected finish color. Allow the primer to dry to the touch before proceeding with finish application.
2. Apply a tight coat of finish with a clean, stainless-steel trowel. Maintain a wet edge on finish by applying and leveling continually over the wall surface.
3. Work finish to corners, joints or other natural breaks and do not allow material to set up within an uninterrupted wall area. Allow first coat to set until surface is completely dry prior to applying a second coat of finish.
4. Use a stainless-steel trowel and apply the second coat of finish. Achieve final texture using circular motions. Total thickness of finish may be between 1/16" (1.6 mm) and 1/8" (3.2 mm).

3.05 CLEANING

A. Clean work under provisions of Section [01 74 00] [x].

B. Clean adjacent surfaces and remove excess material, droppings, and debris.

3.06 PROTECTION

A. Protect materials from rain, snow and frost for 48-72 hours following application.

B. Under average conditions [70 °F (21 °C), 50% Relative Humidity] finish will be dry within 24 hours. Drying time is dependent on humidity, air temperature, sun exposure, surface conditions and finish thickness. Lower temperature, higher humidity and application in shaded areas will extend drying time. Protect finish from rain or other precipitation and temperatures less than 40°F (4°C) for a minimum of 24 hours or until dry.

C. Protect installed construction under provisions of Section [01 76 00] [ ].

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/P or by calling SIKA Facades’ Technical Service Department at 1-800-589-1336. 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/.

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