



Parex® Armourwall Stucco System - Section 09 24 2 coat Impact-resistant cement plaster stucco system.

INTRODUCTION

This specification has been assembled to enable the design professional to select or delete sections to suit the project requirements and is intended to be used in conjunction with Parex typical details, product data sheets, technical bulletins, etc. Throughout the specification, delete those which are not utilized.

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 Armourwall Stucco Wall System

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

A. Wind Load:

1. Maximum deflection not to exceed L/360 under design loads.
2. Design for wind load in conformance with local code requirements.

B. Substrate Systems:

1. Acceptable substrates are PermaBase® Cement Board and other cement-boards conforming with ASTM C1325 (Type A-exterior); poured concrete/unit masonry; ASTM C1177 type sheathings, including, Weather Defense™ Platinum sheathing, GreenGlass® sheathing, e²XP™ sheathing, GlasRoc® sheathing, Securock™ glass-mat sheathing, and DensGlass® exterior sheathing, DensElement (sheathing only); gypsum sheathing (ASTM C79/C1396); Exposure I or exterior plywood (Grade C/D or better); or Exposure I OSB, Huber Zip (sheathing only).
2. The substrate systems shall be engineered with regard to structural performance by others.
3. Refer to Parex's Stucco Wall Systems Lath and Trim Accessories technical bulletin for more detailed information regarding metal lath, woven wire, trim requirements, etc.

C. Moisture Control:

1. Prevent the accumulation of water behind the Parex Armourwall Stucco wall system, either by condensation or leakage through the wall construction, in the design and detailing of the wall assembly.
 - a. Provide flashing to direct water to the exterior where it is likely to penetrate components in the wall assembly, including, above window and door heads, beneath window and door sills, at roof/wall intersections, decks, abutments of lower walls with higher walls, above projecting features, and at the base of the wall and anywhere else required by local code.
 - b. Air Leakage Prevention: Provide continuity of air barrier system at foundation, roof, windows, doors, and other penetrations through the system with connecting and compatible air barrier components to minimize condensation and leakage caused by air movement.
 - c. Vapor Diffusion and Condensation: Perform a dew point analysis of the wall assembly to determine the potential for accumulation of moisture in the wall assembly as a result of water vapor diffusion and condensation. Adjust insulation thickness and/or other wall assembly components accordingly to minimize the risk of condensation. Avoid the use of vapor retarders on the interior side of the wall in warm, humid climates.

Armourwall Stucco Wall System

D. Color Selection: The use of dark colors over expanded polystyrene (EPS) trim shapes must be considered in relation to wall surface temperature as a function of local climate conditions. Select Finish Color with a light reflectance value (LRV) of 20% or higher. The use of dark colors (LRV less than 20%) is not recommended with EPS trim shapes as EPS has a sustained service temperature limitation of approximately 160°F (71°C).

E. Grade Condition: Stucco is not intended for use below grade or on surfaces subject to continuous or intermittent immersion in water or hydrostatic pressure. Ensure a minimum 6" (150 mm) clearance above grade or as required by code, a minimum 2" (50.8mm) clearance above finished grade (sidewalk/concrete flatwork).

F. Decorative Shapes, Projecting Architectural Features:

NOTE TO SPECIFIER: Installation of the Parex Armourwall Stucco wall system with decorative shapes that incorporate EPS outside the slope guidelines referenced in this specification may still qualify for a standard warranty; however, increased maintenance and premature deterioration of the trim shapes shall be expected and any deleterious effects caused by the lack of slope will not be the responsibility of Sika. The design professional has the option to build per his/her project needs. The design professional must also consider geography, climate, building orientation, wall orientation and adjacent building components when designing with EPS trim shapes. The slope guidelines referenced below are provided to offer assistance to the owner and/or design professional. Final design of any building is the responsibility of the design professional.

Minimum slope for all projections shall be 1:2 (27°) with a maximum length of 12" (30.5 cm) [e.g., 6" in 12" (15 cm in 30.5cm)]. Increase slope for Northern climates to prevent accumulation of ice/snow on the surface.

NOTE TO SPECIFIER: Parex Armourwall Stucco wall systems were designed and tested to be applied to vertical surfaces. As the slope of the wall system application decreases, the chance for premature deterioration of any wall system increases. Low sloping conditions are subject to more extreme heat. Low sloped areas are known to produce an increase in wall surface temperature which can lead to accelerated weathering of the low sloped surface.

G. System Joints:

1. Expansion joints in the system are required at building expansion joints, at prefabricated panel joints, floor lines of wood frame construction, where substrates change, at termination at dissimilar materials and where structural movement is anticipated. Detail specific locations in construction drawings.
2. Control joints are required at a minimum of every 144ft² (13m²) of wall surface area and where specified by the design professional. The maximum uncontrolled length or width is 18 lineal feet (5.5 lineal meters) and a maximum uncontrolled length to width ratio of 2 ½: 1. Detail specific locations in construction drawings.

NOTE TO SPECIFIER: It is the sole responsibility of the project design team, including the architect, engineer, etc., to ultimately determine specific expansion and control joint placement, width, and design. Sealant joints are required at all penetrations through the Parex Armourwall Stucco wall system (windows, doors, lighting fixtures, electrical outlets, hose bibs, dryer vents, etc.). Refer to Parex Armourwall Stucco wall system typical details.

H. Decks: Wood decks must be properly flashed prior to system application. For proper application, refer to Parex Armourwall Stucco wall system typical details. The Armourwall Stucco wall system must be terminated a minimum of 1" (25mm) above wood decks.

I. Coordination with other trades:

1. Evaluate adjacent materials such as windows, doors, etc. for conformance to manufacturer's details. Adjacent trades shall provide scaled shop drawings for review.
2. Air seals at any joints/gaps between adjoining components (penetrations, etc.) are of primary importance to maintain continuity of an air barrier system and must be considered by the design professional in the overall wall assembly design. Air seals are needed between the primary air/water-resistive barrier and other wall components (penetrations, etc.) to maintain continuity of an air barrier system.
3. Provide protection of rough openings in accordance with the manufacturers published product data sheet and details before installing windows, doors, and other penetrations through the wall.
4. Install copings and sealant immediately after installation of the Parex Armourwall Stucco wall system and when Parex coatings are completely dry.

TECHNICAL INFORMATION

Armourwall Stucco Wall System

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.

PART 1 – GENERAL

1.01SECTION INCLUDES

- A. Refer to all project drawings and other sections of this specification to determine the type and extent of work therein affecting the work of this section, whether such work is specifically mentioned herein.
- B. Armourwall Stucco Wall System: Composite insulated stucco wall system consisting of an air/water-resistive barrier, approved rigid insulation, plaster base, SikaWall stucco base, Parex base coat(optional), SikaWall reinforcing mesh (optional), SikaWall primer (optional) and Parex finish coat.
- C. 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.
- A. The system type shall be Parex Armourwall Stucco wall system manufactured by Sika Corporation US, Lyndhurst, NJ.

1.02RELATED SECTIONS

- A. Section 03 00 00 Concrete substrate
- B. Section 04 00 00 Masonry substrate
- C. Section 05 40 00 Cold-formed metal framing
- D. Section 06 16 00 Wood sheathing
- E. Section 06 11 00 Wood framing
- F. Section 07 27 00 Air barriers
- G. Section 07 62 00 Sheet Metal Flashing and Trim
- H. Section 07 65 00 Flexible flashing
- I. Section 07 90 00 Joint protection
- J. Section 08 00 00 Openings
- K. Section 09 22 00 Supports for plaster and gypsum board
- L. Section 09 22 16 Non-structural metal framing
- M. Section 09 29 00 Gypsum board
- N. Section 09 22 36 Lath

1.03REFERENCES

- A. ASTM C150 Standard Specification for Portland Cement
- B. ASTM C926 Standard Specification for Application of Portland Cement-Based Plaster
- C. ASTM C1063 Standard Specification for Installation of Lathing and Furring to Receive Interior and Exterior Portland Cement-Based Plaster
- D. ASTM C847 Standard Specification for Metal Lath
- E. ASTM C933 Standard Specification for Welded Wire Lath
- F. ASTM C1032 Standard Specification for Woven Wire Plaster Base
- G. ASTM C1764 Standard Test Methods for Non-Metallic Plaster Bases (Lath) used with Portland Cement Based Plaster in Vertical Applications
- H. ASTM C1787 Standard Specification for Installation of Non-Metallic Plaster Bases (Lath) used with Portland Cement Based Plaster in Vertical Applications
- I. ASTM C1788 Standard Specification for Installation of Non-Metallic Plaster Bases (Lath) used with Portland Cement Based Plaster in Vertical Applications
- J. ASTM D226 Standard Specification for Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing
- K. ASTM D1784 Standard Specification for Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly (Vinyl Chloride) (PVC) Compounds
- L. ICC-ES AC11 Cementitious Exterior Wall Coatings

Armourwall Stucco Wall System

- M. ICC ES 2564 Code Compliance Research Report for Parex 210/202
- N. CCRR 0249 Intertek Code Compliance Research Report (PERMALATH 1000)
- O. ESR-3463 ICC Evaluation Service, LLC, ES Report™ (NEOPOR® Rigid Insulation Board)

1.04 SUBMITTALS

- A. Submit under provisions of Section [01 33 00]
- B. Product Data: Provide data on Parex ArmourWall Stucco wall system materials, product characteristics, performance criteria, limitations, and durability.
- C. Code Compliance: Provide manufacturer's applicable code compliance report.
- D. Samples: Submit [\[two\]](#) [\[x\]](#) [\[inch\]](#) [\[centimeter\]](#) size samples of Parex ArmourWall Stucco wall system illustrating Parex finish color and texture range.
- E. Certificate: System manufacturer's approval of applicator.
- F. Sealant: Sealant manufacturer's certificate of compliance with ASTM C920.
- G. System manufacturer's current specifications, typical details, system design guide and related product literature which indicate preparation required, storage, installation techniques, jointing requirements and finishing techniques.

1.05 QUALITY ASSURANCE

- A. Manufacturer: More than 10 years in the cement plaster stucco industry, with more than 1000 completed cement plaster stucco projects.
- B. Applicator: Approved by Sika in performing work of this section.
- C. Regulatory Requirements: Conform to applicable code requirements for cement plaster stucco.
- 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, [\[x\]](#) [\[feet\]](#) [\[meters\]](#) in size of system materials illustrating method of attachment, Parex 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 air/water-resistive barrier, approved rigid insulation, plaster base, SikaWall stucco base, Parex base coat (if specified), SikaWall reinforcing mesh (if specified), SikaWall primer (if specified), Parex finish coat and typical sealant/flashing conditions.
- E. Testing
 - 1. ArmourWall Stucco System and Component Performance:

TEST	METHOD	CRITERIA	RESULTS
Surface Burning	ASTM E84	Flame Spread < 25 Smoke Development < 450	Meets Class A: Flame spread =15 Smoke developed = 95
Behavior of materials in a vertical tube furnace at 750° C	ASTM E136		SikaWall Stucco Base specimens all met the weight loss criteria for passing the tests
Freeze-thaw resistance	Per ICC-ES acceptance criteria - AC11	10 freeze-thaw cycles with no visible evidence of deterioration when examined under 5X magnification	Pass

Armourwall Stucco Wall System

2. ASTM E330 Wind-Load

Assembly Description	Average Ultimate Loads
3 5/8" 16 GA steel studs 16" o.c., 1/2" gypsum sheathing, awrb, acceptable rigid insulation board, Lath, minimum 1/2" Parex 210/202 Stucco Base	-10.8 kPa (-226 PSF) +11.8 kPa (+226 PSF) * *Positive failure could not be reached. All failures in framing
2" x 4" wood studs 16" OC, 7/16" OSB, awrb, acceptable rigid insulation board, Lath, minimum 1/2" Parex 210/202 Stucco Base	-10.4 kPa (-218 PSF) +10.9 kPa (+228 PSF) All failures in framing

3. ASTM E119 1-hour Fire Resistant Compliant Assembly

WALL COMPONENTS	MATERIALS
Interior gypsum wall board	Any minimum 5/8" thick Type X gypsum wallboard complying with ASTM C1396
Steel Framing	Minimum 3 5/8" deep, minimum 20-gauge steel studs spaced a maximum of 24" on center
Wall cavity insulation - use either 1,2, or 3	1. None 2. Fiberglass batt insulation (faced or unfaced) 3. Mineral wool insulation (faced or unfaced)
Exterior sheathing	Any minimum 5/8" thick Type X exterior sheathing complying with ASTM C1396 and/or ASTM C1177
Air/water-resistive barrier applied to exterior sheathing	No. 15 Asphalt felt -ASTM D226, Type 1 – one layer, Dupont Tyvek Stucco Wrap, Dow WeatherMate or WeatherMate Plus, CertainTeed CertaWrap.
Lath - use either 1,2, or 3	1. PERMALATH 1000 glass fiber lath 2. Metal lath – either 2.5 lb/yd ² or 3.4 lb/yd ² Wire lath – either 1-1/2 inch, 20-gauge or 1-inch, 17-gauge
Stucco	3. Stucco Base - minimum 3/8 "inch thick
Finish Coat	Parex Finish

1.06 DELIVERY, STORAGE AND HANDLING

- Deliver, store and handle products under provisions of Section [01 65 00] [01 66 00] [].
- Deliver Sika materials in original unopened packages with manufacturer's labels intact.
- Protect Sika materials during transportation and installation to avoid physical damage.
- Store Sika materials in a cool, dry place protected from freezing. Store at no less than 40°F/4°C (50°F/10°C Granite & Stone finish).
- Store Maxflash at a minimum of 40°F. In cold weather, keep containers at room temperature for at least 24 hours before using.
- Store insulation boards flat and protected from direct sunlight and extreme heat.
- Store Reinforcing Mesh in a cool, dry place protected from exposure to moisture.

1.07 PROJECT/SITE CONDITIONS

- Do not apply Sika material in ambient temperatures below 40°F/4°C (50°F/10°C for Granite & 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 Granite & Stone Finish) prevail. Do not apply in ambient temperature above 100°F (38°C) or surface temperature above 120°F (49°C).
- Do not apply materials to frozen surfaces.
- Maintain ambient temperature at or above 40°F/4°C (50°F/10°C for Granite & Stone Finish) during and at least 24 hours after material installation and until dry.

Armourwall Stucco Wall System

- 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.

1.08 SEQUENCING AND SCHEDULING

- A. Coordinate and schedule installation of Parex Armourwall Stucco wall system with related work of other sections.
- B. Coordinate and schedule installation of trim, flashing, and joint sealers to prevent water infiltration behind the system.

1.09 WARRANTY

- A. Provide a Sika standard warranty for Parex Armourwall Stucco wall system installations under provisions of Section [01 70 00]. Warranty terms vary with system component configuration.
- B. Comply with Sika notification procedures to assure qualification for warranty. Sika allows 12 months from the date of completion to request a warranty.

PART 2 PRODUCTS

2.01 MANUFACTURERS

All components of the Parex Armourwall Stucco Wall System shall be manufactured by Sika Corporation US and obtained through an authorized distributor.

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. Air/Water-Resistive Barrier Components:

1. Air/Water-Resistive Barrier: (Required, Select One)
1. In accordance with the IRC/IBC, non-wood-based sheathings require a minimum of 1 layer of No.15 asphalt felt, complying with ASTM D226 for Type 1 felt or other approved material.
2. In accordance with the IRC/IBC, wood-based sheathings require a water-resistive vapor permeable barrier with a performance at least equivalent to 2 layers of Grade D paper.
 - a. Exception: 1 layer where the water resistive barrier has a water resistance equal to or greater than 60-minute Grade D paper and is separated from the stucco by an intervening substantially non water absorbing layer or drainage space.

B. Decorative Shapes: (Optional) Expanded polystyrene; ASTM C578, Type I or II

C. Lath/Plaster Base: (Required, Select One)

NOTE TO SPECIFIER: Ensure selection of the appropriate lath based on specified thickness of the Parex Armourwall Stucco wall system. Delete those products not utilized. Reference *Parex Lath & Trim Accessories System support bulletin* for additional information.

1. SikaWall Permalath 1000: An open weave, three-dimensional self-furring, nominal 1/4" thick glass fiber reinforcing lath is for use with a minimum thickness of 1/2" (12.7mm). Complies with ASTM C1764, C1787 and C1788.
2. Woven or Welded Wire Lath: A minimum No. 20 gauge, 1" (25.4 mm) galvanized woven wire fabric is for use with 3/8"-1/2" (9.5-12.7mm) thickness only. Other laths shall comply with ASTM C933 (welded) and ASTM C1032 (woven). The lath is self-furred or furred when applied over all substrates.
3. Expanded Metal Lath: The lath shall comply with ASTM C847. Furring and self-furring requirements shall be as set forth for wire lath. Minimum weight is 2.5 lbs./yd² (1.36 kg/m²). Refer to ASTM C 1063 for additional information.

D. Stucco Base Coat: (Required, Select One)

1. Parex 210 Stucco Base Concentrate: Factory-blended stucco mixture of Portland cement, reinforcing fibers, and proprietary ingredients.

Armourwall Stucco Wall System

2. Parex 202 Stucco Base Sanded: Factory-blended stucco mixture of Portland cement, reinforcing fibers, sand, and proprietary ingredients.

E. Plaster Sand: (Required if SikaWall 510 Stucco Base Concentrate is retained)

Must be clean and free from deleterious amounts of loam, clay, silt, soluble salts, and organic matter. Sampling and testing must comply with ASTM C897. Plaster sand must be graded within the following limits:

Retained on U.S. Standard Sieve	Percent retained by weight \pm 2 Percent	
	Minimum	Maximum
No. 4	-	0
No. 8	0	10
No. 16	10	40
No. 30	30	65
No. 50	70	90
No. 100	95	100

F. Water: Clean and potable without foreign matter.

G. Adhesive/Base Coat: (Required for Trim Shapes and Reinforcing Mesh)

1. Parex 121 Base Coat: A 100% acrylic 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 requires only water for mixing.
3. SikaWall stucco surface leveler: A polymer modified dry mix leveling and embedment coat for use with Parex stucco systems and other Portland cement-based stucco.

H. Portland cement (Required if Parex 121 Base Coat is Selected): Conform to ASTM C150, Type I, IL (ASTM C595), II, or I/II, grey or white; fresh and free of lumps.

I. SikaWall SRT Mesh: a woven fiber glass mesh with high mechanical strength and dimensional stability for improved crack resistance. Must be used with a Parex base coat or SikaWall Stucco Surface Leveler.

J. SikaWall Stucco Prime: A 100% acrylic-based primer that helps alleviate shadowing and reduces chances of efflorescence with standard finishes; color [] to closely match the selected Parex finish color.

NOTE TO SPECIFIER: Stucco Prime is recommended for Swirl finish texture. Although optional in other applications, Parex highly recommends the use of Stucco Prime prior to application of Parex finish over applications of Parex Armourwall Stucco wall system "brown coat." The application of Stucco Prime will enhance color uniformity, ease of application, and will minimize the likelihood of stucco base coat read-through.

K. SikaWall Tinted Primer: A 100% acrylic-based primer that is required for SikaWall Granite & Stone finishes; color [] to closely match the selected finish color.

L. Parex 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: 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: 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

Armourwall Stucco Wall System

- skip-trowel.
 - d. Sand Coarse: Provides a uniform, “pebble” appearance.
 - 3. SikaWall Maxlastic Finish: 100% acrylic based, textured elastomeric finish that provides excellent flexibility and breathability, air cured, compatible with base coat; Parex finish color [] as selected; finish texture:
 - a. R1.5: 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. F1.5: Utilizes uniformly sized aggregates for a uniform, fine texture.
 - c. T0.5: Can achieve a wide variety of free-formed, textured appearances, including stipple and skip-trowel.
 - d. M1.5: Provides a uniform, “pebble” appearance.
 - 4. 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 texture finished appearance.
 - 5. 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.

2.03 ACCESSORIES

Trim: Casing bead, corner bead, expansion joint and weep screed accessories shall meet the requirements of ASTM C1063. Accessories shall be vinyl, meeting ASTM D1784; galvanized, meeting ASTM A525 and ASTM A526; or zinc, meeting ASTM B69. Vinyl or zinc accessories are recommended where highly humid, or salt-laden service conditions exist. Refer to SikaWall’s *Stucco Wall Systems Lath and Trim Accessories* technical bulletin for additional information.

1. C-I Weep Track by Clark Dietrich or AMICO: For returning insulated stucco into doors windows, etc.
2. Foundation weep screed: Beveled edge designed to terminate finished system and drain internal moisture.
3. Casing bead: Square edge style.
4. Corner bead: Small radius nose style.
5. Control joints: W-shaped accordion profile style.
6. Expansion joints: [Two-piece slip-joint design] or [pair of casing beads spaced for application of sealant bead].

PART 3 - EXECUTION

3.01 EXAMINATION

A. Verify project site conditions under provisions of Section [01 89 00][].

B. Walls:

1. Substrates:
 - a. Acceptable substrates are: PermaBase® Cement Board and other cement-boards conforming with ASTM C1325 (Type A-exterior); poured concrete/unit masonry; ASTM C1177 type sheathings, including, Weather Defense™ Platinum sheathing, GreenGlass® sheathing, eXP™ sheathing, GlasRoc® sheathing, Securock™ glass-mat sheathing, and DensGlass® exterior sheathing. DensElement (sheathing only); gypsum sheathing (ASTM C79/C1396); Exposure I or exterior plywood (Grade C/D or better); or Exposure I OSB, Huber Zip Sheathing (sheathing only). Consult Sika Facades’ Technical Services Department for all other applications.
 - b. Sheathings must be securely fastened per applicable building code requirements and manufacturers’ recommendations.

Armourwall Stucco Wall System

- c. Masonry walls should be properly cured to full load bearing capacity, laid true, and with joints tooled. Properly prepared concrete will have an open texture similar to fine grit sandpaper.
- d. Examine surfaces to receive system and verify that substrate and adjacent materials are dry, clean, and sound. Verify substrate surface is flat, free of fins or planar irregularities greater than 1/4" in 10' (6 mm in 3 m).
2. Flashings:
 - a. All flashings are by others and must be installed in accordance with specific manufacturers' requirements. Where appropriate, end-dams must be provided.
 - b. Openings must be flashed prior to window/door, HVAC, etc. installation. Refer to the air/water-resistive barrier manufacturers published product data sheets and details for further information.
 - c. Windows and openings shall be flashed per design and building code requirements.
 - d. Individual windows that are ganged to make multiple units require continuous head flashing and/or the joints between the units must be fully sealed.
3. Roof: Verify that all roof flashings have been installed in accordance with the guidelines set by the Asphalt Roofing Manufacturers Association (ARMA).
4. Kick-out Flashing: Kick-out flashing must be installed where required. The kick-out flashing must be leak-proof and angled (min 100°) to allow for proper drainage and water diversion. Refer to Parex Platinum CI Stucco wall system typical details.
- C. Do not proceed until all unsatisfactory conditions have been corrected.

3.02 PREPARATION

- A. Protect all surrounding areas and surfaces from damage and staining during application of Parex Armourwall Stucco wall system.
- B. Protect finished work at the 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 and equipment with water immediately after use. Dried material can only be removed mechanically.

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

A. Stucco Base Coat:

1. Parex 210 Stucco Base Concentrate: Use mixer which is clean and free of foreign substances. Add approximately 3 gallons (11.35 liters) of clean potable water, one bag of stucco base concentrate and approximately 60 lbs. (27.2 kg) of plaster sand to mixer. Mix for 3-4 minutes at normal mixing speed while adding an additional 140-180 lbs. (64-82 kg) of plaster sand and 1-3 gallons (3.8-11.35L) of water for workability. Total amount of sand needed per bag of 210 stucco base concentrate equals 200-240 lbs. (91-109 kg). Allow the material to set for 2-4 minutes and then remix adding water if necessary to achieve desired consistency. Desired consistency varies with type of application (trowel or gun), substrate (paper-backed lath or block) and whether the stucco is applied to a wall or a ceiling.

Note: Continuous mixing may cause excessive air entrainment.

2. Parex 202 Stucco Base Sanded: Use mixer which is clean and free of foreign substances. Add 1.3 gallons (4.9 liters) of clean potable water to mixer. Slowly add one bag of 202 Stucco Base Sanded, mix until mixture becomes homogeneous, then add additional 0.2 gallons (.75L) of water. Mix at low speed for a minimum of 3 minutes, until the mixture is smooth. Desired consistency varies with type of application (trowel or gun), substrate (paper-backed lath or block) and whether the stucco is applied to a wall or a ceiling. Note: Continuous mixing may cause excessive air entrainment.

NOTE: Do not overmix; never mix for more than five minutes. Mix each batch for the same amount of time. Mix batches of the same size, using the same amount of water, to ensure consistency.

- B. SikaWall Stucco Surface Leveler: Mix and prepare each bag in a 5-gallon (19-liter) pail. Fill the container with approximately 1.3 gallons (4.9 liters) of clean, potable water. Add a full bag of Stucco Surface Leveler to the pail

Armourwall Stucco Wall System

in small increments, mixing after each addition. Mix with a low-speed drill and a rust-free paddle at 400-500 rpm until thoroughly blended. Add an additional 0.3 gallons (1.1 liters) of water to adjust workability (for a maximum of 1.6 gallons (6 liters)). Let mixture stand for 5 – 10 minutes then remix for 1 minute.

C. 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 121 Dry Base Coat: Mix and prepare each bag in a 19-liter (5-gallon) pail. Fill the container with approximately 1.5 gallons (5.6-liters) of clean, potable water. Add 121 Dry Base Coat in small increments, mixing after each additional increment. Mix 121 Dry Base Coat and water with a clean, rust-free paddle and drill until thoroughly blended. Additional 121 Dry Base Coat or water may be added to adjust workability.

D. SikaWall Stucco Prime and 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. Finishes:

1. Parex DPR, Parex Aquasol, SikaWall Maxlastic, and 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, 10 oz maximum.
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.

3.04APPLICATION

A. Accessories:

Attach Window/Door Drip Edge level and per manufacturer's instructions.

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

B. Air/Water-Resistive Barrier:

1. Install according to the specific water resistive barrier manufacturer's specifications and all applicable building code requirements. The water resistive barrier shall be free of any damage such as holes or breaks and must be applied to all surfaces to receive the Parex Armourwall Stucco. Wrap the water resistive barrier into rough openings (doors, windows, etc.). Coordinate work with other trades to ensure proper sequencing, detailing and installation of materials.

C. Trim:

Refer to SikaWall *Stucco Wall Systems Lath and Trim Accessories* technical bulletin.

NOTE TO SPECIFIER: It is the sole responsibility of the project design team, including the architect, engineer, etc., to ultimately determine specific expansion and control joint placement, width, and design.

D. Lath: Install in accordance with all local code requirements, applicable standards, and application procedures

1. PERMALATH 1000: Apply with minimum 3" (76mm) overlap at vertical and horizontal edges and overlap on flange of trim accessories. PERMALATH 1000 can be applied horizontally or vertically and should be applied such that it is flat and free of ripples, wrinkles, etc. Fastener system type appropriate for application and substrate. Fastener spacing 6" o.c. (152 mm) vertically and 16" o.c. (406 mm) horizontally. Apply selected SikaWall stucco base product within 60 days of PERMALATH 1000 application.
2. Woven/Welded Wire Lath:
 - a. Wire or lath shall be applied with minimum 1" (25 mm) end laps and side laps.
 - b. Furring crimps shall occur at maximum 6" (152 mm) intervals each way.
 - c. Refer to ASTM C1063 for additional fastening information.
3. Expanded Metal Lath
 - a. The metal lath shall be applied with minimum 1/2" (13 mm) side laps and 1" (25 mm) end laps.
 - b. When end laps occur between supports, lace or wire ties the ends of the sheets with 0.0475" (1.2 mm) galvanized annealed steel wire.
 - c. Refer to ASTM C1063 for additional fastening information.

Armourwall Stucco Wall System

NOTE: Supplemental fasteners, in the framing or sheathing, can be used to secure lath prior to application of SIKAWALL STUCCO BASE.

E. Stucco Base Coat:

1. 3/8"-1/2" thickness (9.5-12.7 mm) application.
 - a. Following surface preparation and installation of the lath and accessories apply selected SikaWall stucco base mixture to the approved substrate by hand troweling or machine spraying to a thickness of 3/8" to 1/2" (9.5-12.77 mm), completely embedding the lath.
 - b. Use rod and darby to level the applied base coat without exposing the lath.
 - c. After the initial set begins and the surface has sufficiently hardened, use sponge or hard rubber float as required to fill voids, holes, or imperfections, leaving the surface ready to receive Parex Finish.
 - d. Damp cure for at least 48 hours by lightly and evenly fogging the surface with water at least twice a day. Direct sunlight, hot temperatures, low humidity, and windy conditions may make additional fogging necessary.
 - e. Allow stucco base to cure a minimum of 6 days prior to application of EPS board shapes, Parex base coat or Stucco Surface Leveler, Stucco Prime, Tinted Primer or Parex finish application.
2. 3/4"-7/8" thickness (19-22mm) application.
 - a. Nominal plaster base coat thickness:
 - i. First coat "scratch": 3/8" (9.5mm)
 - ii. Second coat "brown": 3/8" (9.5mm)
 - b. Apply selected SikaWall stucco base mixture to the approved substrate by hand troweling or machine spraying with sufficient force to develop full adhesion between the stucco base mixture and the substrate.
 - c. Apply the first coat to completely embed the lath. Cross rake to provide key for second brown coat. Coat must be uniform in thickness. Ensure the first coat is properly "scratched" and sufficiently rigid to resist cracking prior to application and leveling of the second or "brown" coat.
 - d. Dampen scratch coat, apply brown coat to provide the required total thickness. Trowel Stucco Base into trim to seat trim. The lath shall be fully embedded in the coating and shall be completely covered. Coat must be uniform in thickness. Rod off to desired thickness, leveled with screeds, to provide a true, flat plane. Follow this by wood floating or darbying the surface.
 - e. After the surface has sufficiently hardened, use sponge or hard rubber float as required to fill voids, holes, or imperfections, leaving the surface ready to receive Parex Finish.
 - f. At subcontractor's option, the "double back" method of application, whereby the first and second coats are applied and cured as one system, may be used. If this system is used, the second coat (brown) should be applied as soon as the first coat is sufficiently rigid to resist cracking, the pressures of the second (brown) coat application and the leveling process.
 - g. Damp cure for at least 48 hours by lightly and evenly fogging the surface with water at least twice a day. Direct sunlight, hot temperatures, low humidity, and wind may make additional fogging necessary.
 - h. Allow stucco base to cure a minimum of 6 days prior to application of EPS board shapes, Parex base coat or Stucco Surface Leveler, Stucco Prime, Tinted Primer or Parex finish application.

F. Base Coat / SikaWall SRT MESH:

1. Sika Wall Stucco Surface Leveler Base coat or Parex 121 shall be applied to achieve reinforcing mesh embedment with no reinforcing mesh color visible. Apply mixed Parex base coat or Stucco Surface Leveler to entire surface of "brown coat" with a stainless-steel trowel to embed the reinforcing mesh.
2. Immediately place reinforcing mesh against wet base coat and embed the reinforcing mesh into the base coat by troweling from the center to the edges.
3. Ensure reinforcing mesh is continuous at corners, void of wrinkles and embedded in base coat so that no reinforcing mesh color is visible.
4. If required, apply a second layer of base coat to achieve total nominal base coat/reinforcing mesh thickness of 1/16" (1.6 mm).
5. Allow base coat with embedded reinforcing mesh to dry hard (normally 8 to 10 hours).

G. Decorative Shapes:

Armourwall Stucco Wall System

1. Apply mixed Parex base coat or Stucco Surface Leveler to entire surface of insulation board using a stainless-steel trowel with 1/2" x 1/2" (13mm x 13mm) notches spaced 1/2" (13mm) apart or 3/8" x 3/8" (10mm x 10mm) notches spaced 3/8" (10 mm) apart.
 2. Immediately set shape into place and apply pressure over the entire surface of board to ensure positive uniform contact and high initial grab. Do not allow the base coat to dry prior to installing.
 3. Abut all joints tightly and ensure overall flush level surface.
 4. Check adhesion periodically by removing a shape prior to set. Properly installed shapes will be difficult to remove and Parex adhesive/base coat will be adhered to both the Stucco Base and the shape.
 5. Fill 1/16" (1.6mm) and larger gaps between shapes with slivers of insulation board.
 6. Allow application of shapes to dry (normally 8 to 10 hours) prior to application of base coat/reinforcing mesh.
 7. Rasp flush any irregularities of the shapes greater than 1/16" (1.6 mm). Base coat/reinforcing mesh: base coat shall be applied to achieve reinforcing mesh embedment with no reinforcing mesh color visible.
 8. For SikaWall SRT Mesh, apply Parex base coat or Stucco Surface Leveler to entire surface of insulation board with a stainless-steel trowel to embed the reinforcing mesh.
 9. Immediately place reinforcing mesh against wet base coat and embed the reinforcing mesh into the base coat by troweling from the center to the edges.
 10. Lap reinforcing mesh 2 1/2" (64 mm) minimum at edges and 3" (75 mm) minimum onto Stucco Base or base coated stucco surface.
 11. Ensure reinforcing mesh is continuous at corners, void of wrinkles and embedded in base coat so that no reinforcing mesh color is visible.
 12. If required, apply a second layer of base coat to achieve total nominal base coat/reinforcing mesh thickness of 1/16" (1.6 mm).
 13. Allow base coat with embedded reinforcing mesh to dry hard (normally 8 to 10 hours).
- H. SikaWall Stucco Prime and Tinted Primer:**
1. Apply primer to the base coat/reinforcing mesh with a sprayer, 3/8" (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).
 2. Primer shall be dry to the touch before proceeding to the Parex finish coat application.
- I. Parex Finish Coat:** Parex DPR, SikaWall Maxlastic, 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 finishes 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.
- J. SikaWall Granite & Stone Finish:**
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 finishes to corners, joints or other natural breaks and do not allow material to set up within an uninterrupted wall area. Allow the 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).

3.05CLEANING

- A. Clean work under provisions of Section [01 74 00] [].
- B. Clean adjacent surfaces and remove excess material, droppings, and debris.

3.06PROTECTION

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

Armourwall Stucco Wall System

- 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

Armourwall Stucco Wall System

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 1-800-589-1336. 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 the 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/>.