

PAREX®

1. Product Name

Parex Exterior Insulation and Finish Systems (EIFS), including:

- Standard System
- I-C Gold® System

2. Manufacturer

Parex, Inc.
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3. Product Description

BASIC USE

Parex Exterior Insulation and Finish Systems (EIFS) are used as the outer cladding of exterior building walls. These highly energy-efficient systems provide decorative, lightweight, resilient weather protection. Parex adhesive and mechanically attached systems are suitable for new construction as well as renovation. Different insulation boards and base coat thicknesses can be used, depending on the level of thermal and impact resistance required.

COMPOSITION & MATERIALS

Parex Systems are multilayered claddings consisting of 5 elements:

- Attachment
- Insulation
- Reinforcement
- Base Coat
- Finish

Each element is engineered to enhance the function of the other elements and is supplied in a range of products to suit the requirements of different conditions.

Parex Standard System is adhesively attached and uses expanded polystyrene (EPS) insulation board.

Parex I-C Gold® System is mechanically attached and uses extruded polystyrene insulation board. The I-C Gold System's self-gauging base coat is thicker than the Standard System base coat.

ADVANTAGES

Parex Systems offer design versatility. Its wall contours and architectural features can be readily formed, and a wide selection of finishes is available in a complete range of standard and custom colors.

TYPES

Parex Exterior Insulation and Finish Systems are classified in accordance with the EIFS Industry Members Association (EIMA) in the following classification systems:

- PB EIF System - Standard and Premium Systems
- Flexible PM EIF System - I-C Gold

Parex systems are also available with drainage options to meet local code requirements.

STANDARD SYSTEMS

Attachment

- Base Coat and Adhesive 301 - 100% acrylic copolymer based material that is jobsite mixed with ASTM C150 Type I or I-II Portland cement, used to adhere EPS (expanded polystyrene) to masonry, concrete and cement board sheathing
- Dry Base Coat and Adhesive 301 - Factory blended copolymer based cementitious material that is jobsite mixed with water only. It is used to laminate EPS to masonry, concrete, cement board and paper-faced gypsum sheathing
- Full Synthetic Base Coat and Adhesive 302 - Factory prepared, 100% acrylic copolymer based material. This 1 component, full-synthetic material is used to adhere EPS to paper-faced and glass fiber-faced gypsum sheathings
- Sheathing Adhesive 303 - 1 component, factory prepared, full-synthetic material used to adhere EPS to wood based sheathings such as plywood and OSB. It also can be used to adhere EPS to paper-faced and glass fiber-faced gypsum sheathings
- Base Coat and Adhesive 121 - 100% acrylic polymer based material that is jobsite mixed with ASTM C150 Type I or I-II Portland cement, used to adhere EPS to exterior-grade gypsum sheathing and glass fiber-faced gypsum sheathing or masonry, concrete and cement board
- Dry Base Coat and Adhesive 121 - Mixed onsite with water, used to adhere EPS to exterior-grade gypsum sheathing and glass fiber-faced gypsum sheathing or masonry, concrete and cement board

- Mechanical Fasteners - Recommended for any of the substrates on which adhesives are used

Note - Where surface conditions can be detrimental to the performance of an adhesive bond, consult Parex Technical Services.

Insulation Board

1 pcf (16.02 kg/m³) expanded polystyrene conforming to ASTM C578 Type I, listed and labeled under a third party quality control and follow-up program for surface burning characteristics, with flamespread not exceeding 25 (Class A), and smoke developed not exceeding 450. The maximum board dimensions are 2' x 4' x 4" (610 x 1219 x 102 mm). Minimum thickness is 3/4" (19.1 mm). EPS is aged 6 weeks or receives equivalent accelerated cure for dimensional stability.

Reinforcements

All Parex reinforcements are glass fiber fabric meshes treated for protection from alkali and compatible with all Parex base coats. They provide tensile strength and impact resistance to the system.

- Standard Nonwoven Mesh 353 - Non woven, shift-proof glass fiber mesh weighing 6 oz/sq yd (204 g/m²). It is supplied with a minimum of 1.4 oz/sq yd (47 g/m²) of polymer protective coating
- Ultra High Impact 20 - Dense, very high tensile strength glass fiber mesh weighing 20 oz/sq yd (678 g/m²), used as a system reinforcement for maximum impact resistance
- Long Detail Mesh 355 and Short Detail Mesh 356 - Special-use glass fiber meshes offering flexibility for conforming to contours of details and special shapes
- CornerMesh 357 - Heavy duty, factory pre-folded glass fiber mesh for extra corner reinforcement
- Intermediate Impact 10 and High Impact 14 Mesh - Glass fiber meshes used for supplemental impact resistance in the base coat

Base Coat

Base Coat and Adhesive 301, Base Coat and Adhesive 301 Dry, Base Coat and Adhesive 121, Base Coat and Adhesive 121 Dry or Synthetic Base Coat and Adhesive 302 can be used as base coats. They are applied to EPS insulation and are used to embed and coat over glass fiber mesh reinforcements. Reinforced base coats form the primary weather and impact resistant layer of the systems.

Note - For more information on Parex base coat and adhesive selection, see Table 1.

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Finishes

Prior to applying a finish, it is recommended that a primer is used. Parex 100% acrylic copolymer based finishes provide color and texture. They are factory mixed and integrally colored for exterior or interior application. They are resistant to cracking, ultraviolet, mildew, freeze/thaw cycling and abrasion.

Accessories

Parex Track is available to encase insulation board edges at system terminations of each system. Tracks are extrusions of exterior-grade UV resistant rigid vinyl, and form straight, crisp-edged terminations. Square edge tracks provide flat, uniform surfaces for the application of sealants at system edges.

I-C GOLD SYSTEM

Attachment

Nylon or polyolefin washer with expanding shaft anchor for masonry and concrete substrates and self-drilling corrosion resistant screws for framed substrates.

Insulation Board

Extruded polystyrene insulation board, Parex Sanded XPS 383, manufactured by Owens-Corning Foamular®, conforming to ASTM C578 Type IV, listed and labeled under a third party quality control and follow-up program for surface burning characteristics; flamespread not exceeding 25 (Class A) and smoke developed not exceeding 450. The maximum board dimensions are 2' x 8' x 2" (610 x 2438 x 51 mm). Minimum thickness is 1" (25.4 mm). Insulation board is factory planed.

Reinforcements

Refer to descriptions above. The I-C Gold System uses Standard Nonwoven Mesh 353. Intermediate Impact 10 oz mesh is used where increased impact resistance is desired.

I-C One Base Coat 308

I-C One Base Coat 308 is an acrylic copolymer coating formulated in 1 component. Mixing requires addition of water only onsite. I-C One Base Coat 308 is self-gauging to ensure a minimum of 1/8" (3.2 mm) thickness in 2 coats.

Finishes

Parex Primer 310 or Sanded Primer 313 is recommended on cementitious base coats prior to finish application, to enhance uniformity, to reduce the possibility of efflorescence and to ease application of the finishes. Refer to descriptions above. Any of the Parex finishes can be used.

LIMITATIONS

- Thicknesses - Insulation minimum thickness is 3/4" (19.1 mm) at all locations. To conform to code requirements, insulation requires separation from interior spaces by a thermal barrier of 15 minutes or greater rating.
- Pitch - Minimum pitch of sloped surfaces is 6"/12" (152/305 mm) with the run of the slope not to exceed 12" (305 mm). Contact Parex Technical Services for larger runs.
- Colors - Colors with reflective value below 30% are not recommended on south and west walls.
- Deflection - Framing deflection is limited to L/240 or less.
- Proper flashing, sealant and roofing detail must be in place for a successful EIFS installation.

4. Technical Data

APPLICABLE STANDARDS

American Society for Testing & Materials (ASTM)

- ASTM C79/C79M Standard Specification for Treated Core and Nontreated Core Gypsum Sheathing Board
- ASTM C150 Standard Specification for

Portland Cement

- ASTM C578 Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation
- ASTM C1177 Standard Specification for Glass Mat Gypsum Substrate for Use as Sheathing
- ASTM E108 Standard Test Methods for Fire Tests of Roof Coverings
- ASTM E330 Standard Test Method for Structural Performance of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference
- ASTM G23 Standard Practice for Operating Light-Exposure Apparatus (Carbon-Arc Type) With and Without Water for Exposure of Nonmetallic Materials
- ASTM G53 Standard Practice for Operating Light- and Water-Exposure Apparatus (Fluorescent UV-Condensation Type) for Exposure of Nonmetallic Materials

APPROVALS

Building Officials and Code Administrators International, Inc. (BOCA):

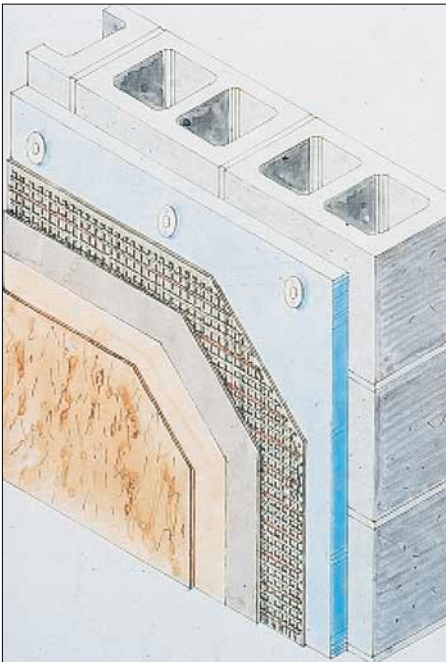
- Standard System - BOCA Evaluation Service Research Report No. RR 96-81
- I-C Gold System - BOCA Evaluation Service Research Report No. RR 95-23

TABLE 1 PAREX BASE COAT/ADHESIVE SELECTION

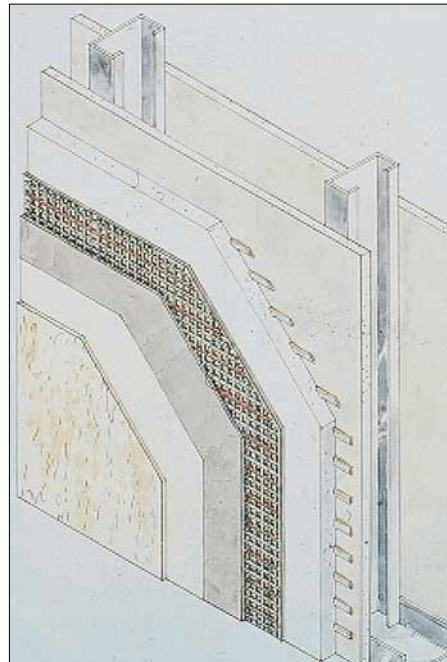
Substrate type ¹	Substrate	Adhesive
Masonry	Concrete masonry units (CMU)	Base Coat & Adhesive 301 Dry Base Coat & Adhesive 301 Base Coat 121, Dry Base Coat & Adhesive 121
	Poured and precast concrete	Base Coat & Adhesive 301 Dry Base Coat & Adhesive 301 Base Coat 121, Dry Base Coat & Adhesive 121
	Brick ¹	Base Coat & Adhesive 301 Dry Base Coat & Adhesive 301 Base Coat 121, Dry Base Coat & Adhesive 121
Sheathed	Exterior gypsum sheathing	Base Coat & Adhesive 301 Dry Base Coat & Adhesive 301 Sheathing Adhesive 303 Base Coat 121, Dry Base Coat & Adhesive 121
	Exterior fiber-faced gypsum sheathing	Base Coat & Adhesive 301 Dry Base Coat & Adhesive 301 Sheathing Adhesive 303 Base Coat 121, Dry Base Coat & Adhesive 121
	Cement board	Base Coat & Adhesive 301 Dry Base Coat & Adhesive 301 Base Coat 121, Dry Base Coat & Adhesive 121
	Wood based sheathing	Sheathing Adhesive 303
	Metal siding sheathing	Sheathing Adhesive 303 and mechanical fasteners ²

¹ For glazed masonry units, glass blocks and similar surfaces, contact Parex Technical Services.

² For detailed information on mechanical fasteners, contact Parex Technical Services.



Parex I-C Gold System



Parex Standard System

City of New York, New York, MEA 6-96-M
International Conference of Building Officials (ICBO)

- Standard System - ICBO Evaluation Report No. ER-4962
- I-C Gold System - ICBO Evaluation Report No. ER-5449

State of Wisconsin DILHR No. 960047-1

Southern Building Code Congress International, Inc. (SBCCI)

- Standard System - SBCCI Evaluation Report No. ER-9629B

- I-C Gold System - SBCCI Evaluation Report No. ER-9647A

Note - The above reports are subject to reexamination, revisions and possible cancellation. Salt spray, abrasion, mildew, acid rain, impact, freeze/thaw cycling, wind driven rain, water vapor transmission, moisture resistance and bond strength test data and reports are available upon request.

PHYSICAL/CHEMICAL PROPERTIES

See Table 2.

5. Installation

STANDARD SYSTEMS

Preparatory Work

- Inspect substrates for suitable type, condition and securement.
- Surfaces must be sound, dry, free of irregularities, paint, and other foreign matter, which can affect the bond of the adhesives.
- Gypsum based sheathings should conform to ASTM C79 or ASTM C1177.
- Concrete must be cured a minimum of 28 days.
- For other conditions, consult Parex Technical Services.
- Ambient and surface temperatures must be 40 degrees F (4 degrees C) or higher during shipment, storage, application and drying of wet materials.

Methods

- Install Parex tracks as required and fiberglass mesh for backwrapping.
- Apply adhesives by notched trowel as specified.
- Install insulation board gap-free in a running bond pattern, offsetting insulation board joints from joints of any sheathing boards. Interlock corners and offset board joints 8" (203 mm) minimum from the corners of openings.
- Allow adhesive to cure.
- Level irregularities in insulation board and coat entire surface with base coat.
- Embed fiberglass mesh in wet base coat, lapping fabric edges a minimum of 2 1/2" (64 mm).
- Apply sufficient base coat to hide the pattern of the mesh and provide a total base coat thickness of 1/16" - 3/32" (1.6 - 2.4 mm).
- Butt fabric edges of heavy duty reinforcing meshes. Do not overlap them.
- Apply a layer of Standard nonwoven reinforcing mesh and base coat over the heavy duty mesh, staggering fabric edges a minimum of 6" (152 mm).
- Apply sufficient base coat to hide the pattern of the Standard nonwoven reinforcing mesh.
- To the cured base coat, apply primer when specified and allow to dry.
- Apply finish coat and texture with trowel or float to match approved project sample.

I-C GOLD SYSTEM

Preparatory Work

- Inspect substrates for soundness to accept mechanical anchors and absence of irregularities.

TABLE 2 PHYSICAL PROPERTIES OF PAREX INSULATION & FINISH SYSTEMS

Property & test	Standard	I-C Gold
R-value, ft ² •h•°F/Btu (m ² •K/W) at 49°F (9°C)	3.85 (0.68)	5.4 (0.95)
R-value, ft ² •h•°F/Btu (m ² •K/W) at 75°F (24°C)	3.57 (0.63)	5.02 (1.0)
Fire performance, ASTM E108	Passed	Passed
Fire performance, UBC 17.6 multistory test	Passed	Not available
Negative wind load resistance, ASTM E330	150 psf (7182 Pa)	125 psf (5985 Pa) (see note)
Accelerated weathering, ASTM G23, 2000 hours	Passed	Passed

Based on standard 16" x 12" (406 x 305 mm) fastener spacing. Contact Parex Technical Services for specific data for higher loads.

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- For framed substrates, inspect for correct spacing of framing members to accept screws on specified spacing.

Method

- Install Parex tracks as required or fiberglass mesh backwrapping.
- Anchor insulation boards using the manufacturer's specified anchoring pattern, typically 16" (406 mm) center-to-center horizontally and 12" (305 mm) center-to-center vertically. Install insulation boards in a running bond pattern, offsetting insulation board joints from joints of any sheathing boards.
- Interlock corners and offset board joints 8" (203 mm) minimum from the corners of openings.
- Insulation board that has not been factory planed must be rasped prior to application of base coat.
- Mix I-C One Dry Base Coat into a clean 5 gal (19 L) pail containing 6 - 7 quarts (5.7 - 6.6 L) of potable water. Allow set time of 5 minutes, then remix using small amounts of water to adjust workability. Trowel-apply base coat to the entire surface of the insulation, allowing the largest aggregate to

approved project sample.

PRECAUTIONS

Follow all application instructions, architectural details, specifications and product data sheets provided by Parex, Inc.

- All system terminations and penetrations require prompt closure to weather entry by sealants, flashings, or both.
- When permanent protection will be delayed, temporary protection must be provided. Sealants must be tested for com-

grade water based acrylic paint.

Timely repair of sealants, flashings or other construction admitting water into the system is essential.

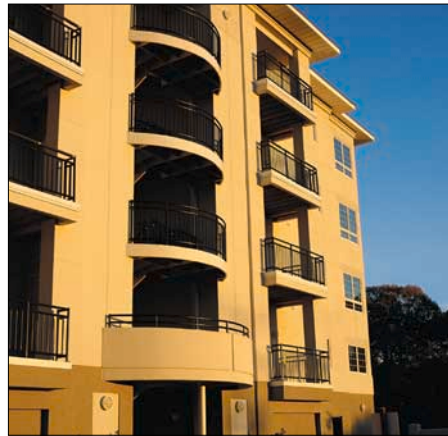
Damaged areas of the system can be replaced by new materials joined onto existing materials. For products and procedures, contact Parex, Inc.

9. Technical Services

Parex, Inc., provides technical literature, educational seminars and videos. Full specifications and detail booklets are available for each system. Specifications are also available on disk. Computerized water vapor transmission and dew point analysis can be obtained at no charge. Parex regional and headquarters technical staff is available for consultation and assistance on all aspects of Parex systems.

10. Filing Systems

- First Source for Products
- Sweet's Catalog Files
- Additional product information is available from the manufacturer.



I-C Gold System

patibility with the system as well as adjacent dissimilar materials.

6. Availability & Cost

Parex Adhesives and Base Coats, Finishes, Reinforcing Meshes and Accessories (Seal Tape, Tracks) are available through Parex distributors located throughout the U.S. For the nearest distributor, contact Parex. Parex distributors will provide references to currently trained applicators.

7. Warranty

Parex, Inc., offers 5 year limited warranty for its Standard System and a 7 year limited warranty for its Premium System and its I-C Gold System depending on project characteristics. Contact Parex, Inc., for details.

8. Maintenance

Parex finishes are low maintenance coatings and can be washed with mild detergents and soft brushing. Surfaces in need of color change or thorough covering of soiling can be recoated with DPR Coating 311 rolled on coating or painted with high quality exterior-



Standard System

gauge the thickness. Immediately bed reinforcing mesh in base coat. The mesh pattern should remain visible. When the base coat is sufficiently dry not to tear, trowel on a second layer of base coat, using the aggregate to gauge the thickness, for a total base coat thickness of approximately 1/8" (3.2 mm).

- To the cured base coat, apply Primer 310 and allow to dry. Apply finish coat and texture with a trowel or float to match