

Pre-coated Foam Architectural Details

Part I General

1.1 Description

Using an state-of-the-art CNC machine, an EPS foam core is precisely cut and preformed, then is coated with a lightweight polymer modified acrylic based flexible cementitious coating, having a fiberglass mesh embedded within. The final product has a smooth finish and is ready for installation and paint, with no need for a stucco finish.

All the moldings (Pre-coated Foam Architectural Details) manufactured by Prime Stucco and Moldings are illustrated and described in the Profiles sections as:

Pilasters, Columns, Bases and Capitals
Quoins, Keystones and Custom Details
Cornices, Sills and Bands, and Trims

1.2 Terms and Definitions

Architects-Designers: A licensed professional under contract with an owner or a builder.

Adhesive: A material applied to the back of a molding, to attach it to a suitable substrate.

Base Coat: the material applied to the shaped EPS foam core, providing a durable, flexible and weather resistant surface to apply specified primer coats and finishes.

Contractor: Qualified and experienced contractor-appliator (sub-trade), installing the moldings.

EPS: Expanded polystyrene precisely cut and used as the core for the Pre-coated Foam Architectural Details.

Expansion Joint: This is a joint through the entire building wall, designed to control building movement.

Finish: The Architect-Designer has the option to specify a suitable finish conducive to prevalent external conditions and compatible to the base coat.

Mechanical Fasteners: An approved device, used as prescribed, to mechanically attach Pre-coated Foam Architectural Details to an approved substrate.

Reinforcing Mesh: A fiberglass fabric, with a specific density. The mesh is applied on the shaped EPS core prior to coating. It improves the flexibility, and impact and tensile strengths of the final product.

Substrate: An approved wall surface where Pre-coated Foam Architectural Details can be installed with acceptable adhesion procedures.

1.3 Design Qualifications

The substrate wall systems shall be flat within a ¼” in (6.4mm) in a 4’ (1.2m) radius, and shall have a maximum allowable wall system deflection under full flexural design loads which does not exceed 1/240 times of span.

Architectural Details will be applied to the following recommended substrates and wall surfaces:

- Clean and in good condition and structurally sound stucco finish
- EIFS System: manufacturer and applicator approved and accepted by Prime Stucco and Moldings
- Properly finished and cleaned cement board
- Poured concrete, well cleaned and free from any contaminants
- Unit masonry or veneer to be approved by Prime Stucco and Moldings

It is the responsibility of the Architect-Designer to locate and design all project expansion joints.

All the moldings must have 24-48 hours drying time and be completely dry prior to the installation of any sealant.

Sealant shall be a tremco 511, with primer A or Dow corning 7902 and 795 with a #1200 primer coat. Sealant shall comply with EIMA 300.01.

Performance References

ASTM Standards:

- Surface burning characteristics of building materials, test method ASTM-E84 ULC 102.
- Smoke development characteristics of building materials, Test method ASTM-E84 ULC 102.
- Vapor permeability characteristics of building materials, Test method ASTM-E96.
- Standard test method for freeze-thaw resistance of Exterior Insulation and Finish Systems (EIFS) class P modified ASTM-C67.
- Mandrel Flexibility characteristics of building materials, Test method ASTM-C203 (Elasticity).
- C578 specification for performed polystyrene thermal insulation.

EIMA Standards:

- EIMA 105.01 standard test for Alkali resistance of Fiberglass Reinforcing Mesh for use in Exterior Insulation and Finish Systems (EIFS).
- EIMA 101.86 standard test method for impact resistance Exterior Insulation and Finish Systems (EIFS).
- EIMA 101.83 standard test method for bond strength of adhesive base coats in Exterior Insulation and Finish Systems (EIFS).

1.4 Quality Assurance

Manufacturer:

- Prime Stucco and Moldings shall manufacture all the moldings provided.
- All associated products and EIFS manufacturer involved with a designated project shall consult/work closely with Prime Stucco and Moldings, and/or their distributor-representative, in order to properly co-ordinate and complete the project by achieving the highest finished building standards possible.

Architect-Designer:

Prime Stucco and Moldings has prepared specifications, in-depth installation details and application instructions etc., all designed to facilitate the design process only. The Architect-Designer assumes the responsibility to choose products to be adaptable for a specific use and the specified, working for and representing the building owner, is totally responsible for all decisions pertaining to shop drawings, design, structural adaptation, attachment details, etc. Prime Stucco and Moldings is not liable for omissions and errors directly related to design, shop drawings, attachments details, structural adaptability, etc., or any changes made by an Architect-Designer or an appointed representative to any Prime Stucco and Moldings published documents.

Contractor:

- Contractor shall be experienced and knowledgeable in EIFS application methods and installation of pre-coated Architectural Details.
- Contractor provided job site supervision for experienced workers and suitable equipment to install pre-coated Architectural Details in compliance with manufacturer specifications, recommendations, and installation methods.

1.5 Product Delivery, Storage, and Handling

Architectural Details are to be picked up at the manufacturer's factory or at an authorized distributor center, or delivered to the project site in its original unopened package with labels intact.

Architectural Details products supplied by the manufacturer should be stored in a cool dry place and protected from direct sunlight, weather and damaging elements.

All Architectural Details products should be stored in a temperature of not less than 40F (5C).

1.6 Project Conditions

- Job Site Conditions: The contractor shall have access to electric power and clean potable water. The area where the materials are to be installed should be clean and reasonably accessible.
- Environmental and Weather Conditions: Wall surface and ambient air temperature shall be at least 40F (4C) during the installation of Architectural Details products. Wall surface and ambient temperatures must remain above 40F (4C) for at least 24 hours or longer after installation if necessary, for the materials to sufficiently dry.
- Protection: Supplemental heat shall be provided for application when temperature is less than 40F (4C). During and after the application of the Architectural Details products, the products shall be protected by temporary or permanent means from the weather and other potential damaging elements. To prevent damage to the products, measures should be taken to prevent condensation and/or heat build up when tarps or plastic sheets are used. When the moldings are being applied, adjacent areas/materials shall be protected to prevent damage from drops and spills.

- Sequencing and Scheduling: Architectural Details products installation should be coordinated with all the associated trades. Proper equipment and sufficient experienced personal shall be employed to ensure an appearance that is continuous, free of scaffold lines, cold joints and texture variations. To prevent water infiltration behind the system, finish coat and sealant should be installed as soon as possible after Architectural Details products installation.

1.7 Limited Materials and Labor Warranty

Prime Stucco and Moldings provides a one-year limited material warranty for the Architectural Details and associated products. Receipt of a properly executed warranty request and completed project form is required.

The contractor shall offer a limited one year labor and workmanship warranty.

Part II Products

2.1 Manufacturer

- Pre-coated Foam Architectural Details are manufactured by Prime Stucco and Moldings at 200 Edgeley Blvd., Unit 4-6, Concord, Ontario L4K 3Y8.
- Pre-coated Foam Architectural Details shall be supplied by and obtained from Prime Stucco and Moldings, or its authorized distributors. Substitutions or additions of materials other than specified or approved by Prime Stucco and Moldings in writing will void the warranty.

2.2 Materials

Architectural Detail Moldings

- Moldings
- Quoins, Keystones, Brackets
- Columns, Bases, and Capitals

Fiberglass Mesh

Self Adhesive Reinforcing Mesh weighing a minimum of 95g/m² (2.8oz/yd²).

Styrofoam Core

A fire-rated, rigid expanded polystyrene (EPS) foam, conforming to physical properties of ASTM-C578. Type I or CAN/CGSB-51.20 Type I, 1.00 lb/cu.ft (17.0 kg/m³) density.

Adhesive

A high performance acrylic modified cementitious material available in Pails and field mixed with type 10 or 20 Portland cement at a 1 to 1 ratio or available in bags to be field mixed with water using a ratio specified by a manufacturer recommended by Prime Stucco and Moldings.

Coating

The coating is a lightweight polymer-modified acrylic cementitious material applied to the EPS shapes in a climate controlled plant, with a minimum thickness of 1/8" according to EIMA 101.1.

Finishes

Typically, the finishes shall be an acrylic polymer based material with a quartz aggregate having an integral color and texture.

Primers

The primers shall be an acrylic based and color pigmented to compliment the color of the finish coat.

Mechanical Fasteners

To be used if required and specified. The fasteners shall include a corrosion resistant screw, which will be suitable for penetration and attachment to substrate.

2.3 Job Site Equipment

- Power and/or hand tools related to the EIFS and plastering trades.
- All material to be job site mixed. Shall be mixed with a clean mixer using ½” drill at 400-500 RPM or with equipment with equivalent power and performance.
- A hot knife or hot Grover and a wood router (high speed) with a proper set of bits.

Part III Installation**3.1 General***3.1.1 Surface Preparation*

- Both the wall surface and ambient temperature shall be a minimum of 40F (4C) or higher.
- The surface of the substrate and the surface of the moldings shall be clean, dry, and free of grease, paint, oil or any foreign material.
- The surface of the substrate shall be level, plane and true, being 1/8 (3mm) within 4ft (1.2m).
- Contractor shall report unsatisfactory substrate conditions to general contractor for correction by substrate installer before application of products.

3.1.2 Attachment

- The Architectural Details shall be attached on an approved substrate with a proper adhesive and mechanical fastener.
- The adhesive should be applied as per Prime Stucco and Moldings installation instructions, or as per the EIFS adhesive manufacturer specifications.
- Apply adhesive to the entire back surface of the Architectural Detail using a 9.5mm (3/8”) notched trowel. Immediately, while the adhesive is still wet, apply by firmly pressing and properly positioning the piece onto the substrate. Large pieces require temporary mechanical fasteners as a support system until the adhesive sets.

3.1.3 Sealant Application

- All sealant shall be applied as per manufacturer specifications. Any expansion joint running through Architectural Details shall have sealant systems installed as per manufacturer specifications, and exposed joint areas shall be properly treated with a base coat and reinforcing fiberglass mesh.

3.1.4 Finish Application

Finish coats shall be applied to the pieces as per the approved EIFS manufacturer specifications.

3.2. Standard Procedure for Molding Installation

This procedure is recommended for the following systems:

- EIFS
 - Extruded Insulation
 - Wire Mesh
 - Mineral Wool
 - Cement Board
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1. Dry fit and/or cut on site the molding as per the architectural drawings and existing structure.
 2. Apply adhesive of system manufacturer to the back of the molding in a vertical pattern, using 3/8" notched trowel. If skinning occurs on the adhesive, scrape off and replace it with fresh adhesive before installing the molding.
 3. Press the molding into place using temporary mechanical fasteners as per selected manufacturers system to secure molding while the adhesive cures.
 4. Remove excess adhesive (if any) along the molding before curing.
 5. Refer to system details, exhibits and follow the step by step installation procedure.
 6. Apply caulking at the joint between the molding and the substrate.
 7. Allow the material to cure.
 8. When joining two pieces, at the junction, leave a gap of not exceeding 1/4". Cover all joints with caulking.