

SECTION 07240

EXTERIOR INSULATION AND FINISH SYSTEM

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Composite exterior insulation and finish system consisting of rigid insulation, base coat, reinforcing mesh and finish coat.

1.2 RELATED SECTIONS

- A. Section 03300 - Cast-In-Place Concrete.
- B. Section 04810 - Unit Masonry Assemblies.
- C. Section 05400 - Cold-Formed Metal Framing.
- D. Section 07600 - Sheet Metal Flashing.
- E. Section 07900 - Joint Sealers.
- F. Section 09260 - Gypsum Board Assemblies.

1.3 REFERENCES

- A. ASTM B 117 - Practice for Operating Salt Spray (Fog) Testing Apparatus.
- B. ASTM C 67 - Standard Method of Sampling and Testing Brick and Structural Clay Tile.
- C. ASTM C 150 - Standard Specification for Portland Cement.
- D. ASTM C 297 - Standard Test Method for Tensile Bond Strength of Flat Sandwich Constructions in Flatwise Plane.
- E. ASTM C 578 - Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation.
- F. ASTM D 968 - Standard Test Method for Abrasion Resistance of Organic Coatings by Falling Abrasive.
- G. ASTM D 1682 - Standard Test Method for Break Load and Elongation of Textile Fabrics.

- H. ASTM D 2247 - Standard Practice for Testing Water Resistance of Coatings in 100% Relative Humidity.
- I. ASTM E 84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
- J. ASTM E 96 - Standard Test Methods for Water Vapor Transmission of Materials.
- K. ASTM E 108 - Standard Test Methods for Fire Tests of Roof Coverings.
- L. ASTM E 119 - Standard Test Methods for Fire Tests of Building Construction and Materials.
- M. ASTM E 330 - Standard Test Method for Structural Performance of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference.
- N. ASTM E 331 - Standard Test Method for Water Penetration of Exterior Windows, Curtain Walls and Doors by Uniform Static Air Pressure Difference.
- O. ASTM E 695 - Standard Method of Measuring Relative Resistance of Wall, Floor and Roof Construction to Impact Loading.
- P. ASTM G 23 - Standard Practice for Operating Light-Exposure Apparatus (Carbon-Arc Type) With and Without Water for Exposure of Nonmetallic Materials.
- Q. ASTM G 53 - Standard Practice for Operating Light- and Water-Exposure Apparatus (Fluorescent UV-Condensation Type) for Exposure of Nonmetallic Materials.
- R. EIMA 101.86 - Standard Test Method for Resistance of EIFS to Effects of Rapid Deformation (Impact); EIFS Industry Members Association.
- S. Fed. Spec. TT-C-555B - Coating, Textured (For Interior and Exterior Masonry Surfaces); General Services Administration.
- T. MIL-Y-1140G - Yarn, Cord, Sleeving, Cloth and Tape-Glass.
- U. MIL-STD-810 B (Method 508) - Environmental Test Methods and Engineering Guidelines; Fungus.

- V. UBC Std. 17-6 - Full Scale Multi-Story Fire Test; International Conference of Building Officials.
- W. UL 723 - Standard for Test for Surface Burning Characteristics of Building Materials.
- X. Radiant Heat Test Method to Determine Performance of an Exterior Wall Assembly Exposed to Radiant Heat and Piloted Ignition Source.

1.4 DEFINITIONS

- A. Exterior Insulation and Finish System (EIFS): Exterior assembly comprised of insulation board, base coat, reinforcing mesh, and finish coat.
- B. Class PB Systems: A class of EIFS where the base coat varies in thickness depending upon the number of layers or thickness of reinforcing mesh. The base coat shall be applied so as to achieve reinforcing mesh embedment with no reinforcing mesh color visible, nominal 1/16 inch (1.58 mm). The reinforcing material is glass fiber mesh which is embedded into the base coat at the time of installation. Protective finish coats, of various thickness, in a variety of textures and colors, are applied over the base coat.

1.5 SYSTEM DESCRIPTION

- A. Performance Requirements: System shall meet or exceed the following performance standards when tested in accordance with the following methods:
 1. Accelerated Weathering (ASTM G 23, testing period of 2000 hours or ASTM G 53, testing period of 3000 hours): No cracking, flaking, or adverse effects.
 2. Wind Driven Rain (Fed. Spec. TT-C-555B): No visible leaks or dampness throughout to the rear face and less than 90 gram increase.
 3. Moisture Resistance (ASTM D 2247): 14-day exposure; No adverse effects.
 4. Salt Spray Resistance: ASTM B 117 Salt Spray (Fog) Testing: Testing period of 300 hours; No adverse effects.
 5. Mildew Resistance (MIL-STD-810B, Method 508): No mildew growth supported after 28 days.

6. Abrasion Resistance (ASTM D 968, Method A): No cracking, checking, or loss of film integrity after 500 liters (17.65 cu ft) of sand.
7. Surface Burning Characteristics (ASTM E 84 and UL 723): Test specimen consists of base coat, reinforcing mesh and finish coat; flame spread less than 25 and smoke developed less than 450.
8. Full Scale Diversified Fire Testing (ASTM E 108, modified for vertical walls): No significant contribution to vertical or horizontal flame spread and no fall-off of coating and fire involvement of insulation core.
9. Freeze-Thaw Resistance (ASTM C 67): No visible damage and negligible weight gain after 50 cycles.
10. Negative Wind Load/Full Scale Testing (ASTM E 330): Positive and Negative Air Pressure; withstand wind loads required by applicable codes.
11. Measuring Relative Resistance of Wall, Floor, and Roof Construction to Impact Loading (ASTM E 695): 60 lb. impact mass; no cracking from a drop height of 6 ft.
12. Full Scale Multi-Story Fire Test (UBC Std. 17-6):
 - a. Flames do not propagate beyond the immediate area of flame impingement on the exterior face of the wall panels.
 - b. Flame propagation does not occur vertically or laterally through the core insulation to the limits of the test panels. Flame propagation may be judged to occur within the test panels when temperatures within the insulation core outside the region of direct flame exposure exceed 750 degrees F (398.8 degrees C) above ambient.
 - c. Flame propagation shall not occur to the first-floor wall panels extending beyond the concrete block walls of the test fixture either through core insulation or over the exterior or interior panel surfaces. Where the flame cannot be directly observed, flame propagation shall be assumed to occur where the temperatures within the insulation core exceed 750 degrees F (398.8 degrees C) above ambient.
 - d. Temperatures measured 1 inch (25 mm) from the interior surfaces of the wall assembly within the second story do not exceed 350 degrees F (176.6 degrees C) .
 - e. Flames do not enter the second-story room.

13. Radiant Heat Ignition Resistance Test of Exterior Wall Assemblies: Test assembly demonstrated satisfactory performance during the 20-minute test period.
14. Test Method for Water Penetration of Exterior Curtain Walls by Uniform Static Air Pressure (ASTM E 331): No penetration of water into the plane of the innermost face of the test specimen during the test period at 12 psf pressure differential.
15. Fire Resistance (ASTM E 119): Fire resistance not reduced by addition of EIFS.
16. Impact Resistance (EIMA Impact Standard 101.86):
 - a. Standard Impact: 25 to 49 inch-pounds (316,500-620,340 N m).
 - b. Medium Impact: 50 to 89 inch-pounds (633,000-1,126,740 N m).
 - c. High Impact: 90 to 150 inch-pounds (1,139,400-1,899,000 N m).
 - d. Ultra High Impact: Over 150 inch-pounds (1,899,000 N m).
17. Tensile Bond Strength (ASTM C 297): Exceed 10 pounds per square inch (68.9 kPa) on various substrates, including masonry, gypsum sheathing, and wood-based sheathing.

1.6 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Product Data: Provide data on materials, product characteristics, performance criteria, limitations, and durability.
- C. Shop Drawings: Indicate joint pattern and joint details, thickness, and installation details.
- D. Samples: Submit samples illustrating base and finish coat color and texture.
 1. Size: _____.
- E. Certificates:
 1. System manufacturer's approval of applicator.
 2. System manufacturer's letter that materials meet or exceed specified requirements.

- F. Installation Instructions: Indicate manufacturer's requirements for preparation, installation techniques, jointing, and finishing techniques.

1.7 QUALITY ASSURANCE

- A. Applicator: Approved by manufacturer to perform work of this section.
- B. Manufacturer: Member of EIFS Industry Members Association (EIMA).
- C. Mock-ups:
 - 1. Construct mock-up panel for each color and texture, illustrating method of attachment, surface finish, color and texture.
 - 2. Include typical joints, termination of system at grade, and termination of system at openings such as doors, windows, and other building materials.
 - 3. Size: _____.
 - 4. Prepare each mock-up panel using the same tools and techniques to be used for the actual application.
 - 5. Locate mock-up panel where directed.
 - 6. Adjust panel workmanship and appearance to the satisfaction of the Architect.
 - 7. Accepted panel may remain as part of the Work.
 - 8. Remove mock-up from the site upon conclusion and acceptance of the Work.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials in original unopened packages with manufacturer's labels intact.
- B. Protect materials during transportation and installation to avoid physical damage.
- C. Store materials in cool, dry place, at not less than 40 degrees F (4.4 degrees C).
- D. Store the following at no less than 50 degrees F (10 degrees C):
 - 1. "Aurora 'T'" finish.
 - 2. "Aurora 'TC-100'" finish.
 - 3. "Borealis" finish.

- E. Store other materials at no less than 40 degrees (4.4 degrees C). Protect from extreme heat and direct sunlight.
- F. Store insulation board flat. Store reinforcing mesh in cool, dry place protected from exposure to moisture.

1.9 PROJECT CONDITIONS

- A. Do not apply materials to frozen surfaces.
- B. Maintain ambient temperature at or above 40 degrees F (4.4 degrees C) during and at least 24 hours after system installation and until dry.
- C. Maintain ambient temperature at or above 50 degrees F (10 degrees C) during and at least 24 hours after installation and until dry, for the following:
 - 1. "Aurora 'T'" finish.
 - 2. "Aurora 'TC-100'" finish.
 - 3. "Borealis" finish.
- D. Provide supplementary heat during installation and drying period if necessary to maintain specified temperature.

1.10 SEQUENCING AND SCHEDULING

- A. Coordinate and schedule installation of 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.

1.11 WARRANTY

- A. Comply with Senergy project review requirements and notification procedures to assure qualification for warranty.
- B. Provide Senergy standard five-year residential warranty for Senerflex Wall System installations.
- C. Provide Senergy standard five-year materials replacement warranty for Senerflex Wall System installations.
- D. Provide Senergy standard five-year labor and material warranty for Senerflex Wall System installations greater

than 10,000 square feet of wall area or any prefabricated panels.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Provide "Senerflex Wall System (Class PB System)" manufactured by Senergy Division of Harris Specialty Chemicals, Inc.; 10245 Centurion Parkway North, Jacksonville FL 32256; ASD. Tel. (904) 996-6000, Fax. (904) 996-6300.

2.2 MATERIALS

- A. Substrate Primer: "Senerprime"; black-tinted, 100 percent acrylic-based sheathing primer.
- B. Adhesive:
 - 1. "Senerquick Adhesive"; water-reducible, non-cementitious, translucent white adhesive.
 - 2. "NC-II Base"; 100 percent acrylic polymer-based, non-cementitious base coat.
 - 3. "Senerflex Standard Base Coat"; 100 percent acrylic base coat, field-mixed with Portland cement.
 - 4. "Senerflex Alpha Base Coat"; 100 percent acrylic base coat, field-mixed with Portland cement.
 - 5. "Alpha Dry Base Coat"; Dry-mix base coat containing Portland cement.
 - 6. "Xtra-Stop Base Coat"; 100 percent acrylic-based, waterproof base coat, field-mixed with Portland cement.
 - 7. "Senerflex ULTRA Base Coat"; Fiber-reinforced, 100 percent acrylic base coat, field mixed with Portland cement.
- C. Base Coat:
 - 1. "NC-II Base"; 100 percent acrylic polymer-based, non-cementitious base coat.
 - 2. "Senerflex Standard Base Coat"; 100 percent acrylic base coat, field-mixed with Portland cement.
 - 3. "Senerflex Alpha Base Coat"; 100 percent acrylic base coat, field-mixed with Portland cement.
 - 4. "Alpha Dry Base Coat"; Dry-mix base coat containing Portland cement.
 - 5. "Xtra-Stop Base Coat"; 100 percent acrylic-based, waterproof base coat, field-mixed with Portland cement.

6. "Senerflex ULTRA Base Coat"; Fiber-reinforced, 100 percent acrylic base coat, field mixed with Portland cement.
- D. Portland Cement: ASTM C 150, Type I, II, or I/II; fresh and free of lumps.
 1. White cement where required to achieve specified color.
 - E. Water: Clean and potable without foreign matter.
 - F. Insulation Board: Expanded Polystyrene; ASTM C 578, Type I; flame spread less than 25, smoke developed less than 450 per ASTM E 84; minimum density 0.9 pounds per cubic foot (14.4 kg/m); K=0.24 per inch (0.41 metric equivalent); 3/4 inch (19 mm) minimum thickness as indicated on Drawings; meeting the following:
 1. Air dried (aged) six weeks, or equivalent, prior to installation.
 2. Edges: Square within 1/32 inch per foot (2.6 mm per m).
 3. Thickness: Tolerance of plus or minus 1/16 inch (1.58 mm).
 4. Size: 2 feet by 4 feet (609 mm by 1219 mm).
 5. Length and width: Tolerance of plus or minus 1/16 inch (1.58 mm).
 - G. Gap Filler: "Senerflex Insul-Fil"; trowel-applied, white, fluffy, insulation board gap-filler.
 - H. Reinforcing Mesh: "Senerflex Reinforcing Mesh"; MIL-Y-1140G; balanced, open weave glass fiber reinforcing mesh; twisted multi-end strands treated for compatibility with wall system components.
 1. Standard weight: "Flexguard 4."
 2. Standard/medium weight: "Flexguard 6."
 3. Intermediate weight: "Flexguard 10."
 4. Heavy weight: "Flexguard 15."
 5. Heavy weight: "Flexguard 20."
 6. Corner grid: Intermediate weight mesh, pre-marked for easy bending, for reinforcing at exterior corners.
 - I. Joint Sealant Substrate Conditioner:
 1. "Senergy ASAP" 100 percent acrylic-based coating.
 2. "Senergy ASAP Plus" siliconized acrylic-based coating.

3. "Senergy Color Coat" 100 percent acrylic-based coating.
 4. "Senergy Color Coat Plus" siliconized acrylic-based coating.
 5. Color: Match sealant/finish coat color.
- J. Finish Coat Primer: "Senergy Tinted Primer"; 100 percent acrylic-based primer; color to closely match the selected finish coat color.
- K. Finish Coat: "Senergy Finish Coat"; 100 percent acrylic resin finish; air cured, compatible with base coat. Color factory-mixed. Finish texture:
1. "Classic."
 2. "Fine."
 3. "Belgian Lace."
 4. "Texture."
 5. "Coarse."
 6. "Matrix."
 7. "Sahara."
 8. "Borealis."
 9. "Aurora Stone."
 10. "Aurora TC-100."
- L. Finish Coat: "Silcoat Finish"; siliconized acrylic emulsion finish coat; air cured, color factory-mixed. Finish texture:
1. "Classic."
 2. "Fine."
 3. "Belgian Lace."
 4. "Texture."
 5. "Sahara."
- M. Finish Coat: "Senerlastic Finish"; 100 percent acrylic-based elastomeric finish coat; air cured, color factory-mixed. Finish texture:
1. "Classic."
 2. "Fine."
 3. "Belgian Lace."
 4. "Sahara."
- N. Finish Coat: "Senerlastic Plus"; siliconized acrylic-based elastomeric finish coat; air cured, color factory-mixed. Finish texture:
1. "Classic."
 2. "Fine."
 3. "Belgian Lace."

4. "Sahara."

O. Finish Coat Color:

1. _____.
2. Multiple colors as indicated on the drawings.
3. Field color: _____.
4. Accent color: _____.

2.3 MIXING

A. General:

1. Close containers when not in use.
2. Clean tools with soap and water immediately after use.
3. Additives or admixtures are not permitted.

B. "Senerprime":

1. Material is ready to use directly from the pail. Stir thoroughly prior to use.
2. Do not add water.

C. Senerflex Adhesives/Base Coats:

1. "NC-II Base":
 - a. Mix with a paddle and drill to a homogeneous consistency.
 - b. Clean, potable water may be added to adjust workability.
2. "Senerquick Adhesive":
 - a. Stir to a homogeneous consistency.
3. "Senerflex Standard Base Coat":
4. "Senerflex Alpha Base Coat":
5. "Senerflex Xtra-Stop Base Coat":
6. "Senerflex Ultra Base Coat":
 - a. Prepare in a container that is clean and free of foreign substances. Do not use container that has contained or been cleaned with a petroleum-based product.
 - b. Mix base coat liquid with a paddle and drill to a homogeneous consistency, before adding Portland cement.
 - c. Mix one part (by weight) Portland cement with one part base coat liquid. Add Portland cement in small increments, thoroughly mixing to a homogeneous consistency after each additional increment.
 - d. Clean, potable water may be added to adjust workability.
7. "Alpha Dry Base Coat":

- a. Mix and prepare each bag in a 5-gallon (19 L) pail that is clean and free of foreign substances. Do not use a container that has contained or been cleaned with a petroleum based product.
 - b. Fill the container with approximately 1-1/2 gallons (5.6 L) of clean, potable water.
 - c. Add base coat powder in small increments, mixing after each additional increment.
 - d. Mix base coat powder and water with a mixer to a homogeneous consistency.
 - e. Additional base coat powder or water may be added to adjust workability.
- D. "Senerflex Insul-Fil":
1. Upon opening, material may appear dry. Thoroughly mix the factory-prepared material with a mixer to a fluffy, moist consistency.
 2. If necessary, a small amount of clean, potable water maybe added to adjust workability.
- E. "Senergy ASAP," "Senergy ASAP PLUS," "Senergy Tinted Primer," "Senergy Color Coat," "Senergy Color Coat Plus," and "Senergy Finish Coat":
1. Thoroughly mix the factory-prepared material to a uniform consistency.
 2. A small amount of clean, potable water may be added to adjust workability.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Examine surfaces to receive EIFS, and verify that substrate and adjacent materials are dry, clean, sound and free of releasing agents, paint, or other residue or coatings.
- B. Verify substrate surface is flat, free of fins or planar irregularities greater than 1/4 inch in 10 feet (6.35 mm in 3 m).
- C. Do not apply system to unacceptable substrates. Report unacceptable conditions to the Architect.
- D. Correct unacceptable conditions before installing system.

3.2 PREPARATION

- A. Protect surrounding areas and surfaces from damage and staining during application of system.
- B. Protect finished work at end of each day to prevent water penetration.

3.3 APPLICATION

- A. General: Apply materials in accordance with manufacturer's instructions and recommendations.

3.4 WATER-RESISTANT CORE GYPSUM SHEATHING SUBSTRATES

- A. Apply adhesive to entire surface of insulation board using a stainless steel trowel.
- B. "Senerquick Adhesive"; use trowel with notches 3/16 inch (4.7 mm) by 3/16 inch (4.7 mm), spaced 3/16 inch (4.7 mm) apart.
- C. Use trowel with notches 1/2 inch (12 mm) by 1/2 inch (12 mm), spaced 1/2 inch (12 mm) apart, or trowel with notches 3/8 inch (9.5 mm) by 3/8 inch (9.5 mm), spaced 3/8 inch (9.5 mm) apart, for the following:
 - 1. "NC-II Base."
 - 2. "Standard Base Coat."
 - 3. "Alpha Base Coat."
 - 4. "Alpha Dry Base Coat."
 - 5. "Xtra-Stop Base Coat."
 - 6. "Ultra Base Coat."

3.5 "DENS-GLAS GOLD" SHEATHING SUBSTRATES

- A. Primerless Adhesive:
 - 1. Apply "Senerquick Adhesive" to entire surface of insulation board using a stainless steel trowel with notches 3/16 inch (4.7 mm) by 3/16 inch (4.7 mm), spaced 3/16 inch (4.7 mm) apart.
- B. Primer and Adhesive:
 - 1. Primer: Apply "Senerprime" primer uniformly to substrate with 3/8 inch (9.5 mm) nap roller, good-quality latex paint brush, or spray-apply at a rate of 200 to 400 square feet per gallon (4.8-9.7 sq m/L).
 - a. Apply primer only to areas that will receive the base coat/insulation board application the same day.

- b. Primer shall be dry to the touch before proceeding to base coat/insulation board application.
2. Apply adhesive to entire surface of insulation board using a stainless steel trowel with notches 1/2 inch (12 mm) by 1/2 inch (12 mm), spaced 1/2 inch (12 mm) apart, or trowel with notches 3/8 inch (9.5 mm) by 3/8 inch (9.5 mm), spaced 3/8 inch (9.5 mm) apart, for the following:
 - a. "NC-II Base."
 - b. "Standard Base Coat."
 - c. "Alpha Base Coat."
 - d. "Alpha Dry Base Coat."
 - e. "Xtra-Stop Base Coat."
 - f. "Ultra Base Coat."

3.6 CEMENTITIOUS SUBSTRATES

- A. Substrates include: "Wonder Board," "Durock," "Plycem," "Harditex," "Eterspan," cast-in-place concrete, unit masonry.
- B. Apply adhesive to entire surface of insulation board using a stainless steel trowel.
 1. "Senerquick Adhesive"; use trowel with notches 3/16 inch (4.7 mm) by 3/16 inch (4.7 mm), spaced 3/16 inch (4.7 mm) apart.
 2. Use trowel with notches 1/2 inch (12 mm) by 1/2 inch (12 mm), spaced 1/2 inch (12 mm) apart, or trowel with notches 3/8 inch (9.5 mm) by 3/8 inch (9.5 mm), spaced 3/8 inch (9.5 mm) apart, for the following:
 - a. "NC-II Base."
 - b. "Standard Base Coat."
 - c. "Alpha Base Coat."
 - d. "Alpha Dry Base Coat."
 - e. "Xtra-Stop Base Coat."
 - f. "Ultra Base Coat."
- C. Apply a ribbon of adhesive approximately 2 inches (50 mm) wide by 3/8 inch (9.5 mm) thick to entire perimeter of each board, with a stainless steel trowel. Apply dabs or ribbons of 3/4 inch (19 mm) thickness and 4 inches (101 mm) in diameter, approximately 8 inches (203 mm) on center to interior area of board. Apply the following:
 1. "NC-II Base."
 2. "Standard Base Coat."
 3. "Alpha Base Coat."
 4. "Alpha Dry Base Coat."
 5. "Xtra-Stop Base Coat."

6. "Ultra Base Coat."

3.7 INSULATION BOARD

- A. On vertical surfaces begin at base from firm, permanent or temporary support.
1. Apply horizontally in a running bond.
 2. Identify expansion joints and other joints and aesthetic grooves indicated on Drawings. Layout boards such that aesthetic grooves do not align with insulation board joints.
 3. Pre-cut insulation board to fit openings and projections.
 4. Install insulation board as a single piece around corners of openings.
 5. Stagger vertical joints and corners.
 6. Stagger insulation and sheathing board joints.
 7. Immediately slide board into place and apply pressure over entire surface of board to ensure uniform contact and high initial grab. Do not allow adhesive to dry prior to installing.
 8. Abut all joints tightly and ensure overall flush level surface.
 9. Check adhesion periodically by removing a board prior to set. Properly installed insulation board will be difficult to remove and adhesive will be adhered to both the substrate and insulation board.
 10. Allow application of insulation board to dry (normally 8 to 10 hours) prior to application of base coat and reinforcing mesh.
 11. Rasp flush any irregularities of the insulation board greater than 1/16 inch (1.5 mm).
 12. Install expansion joints and other joints as indicated on Drawings.
- B. Gaps Between Insulation Boards: Fill gaps with slivers of insulation board, or fill gaps less than 1/2 inch with "Insul-Fill," as follows:
1. Apply mixed "Insul-Fil" to minor gaps less than 1/2 inch (12 mm) wide. Use a clean, stainless steel trowel.
 2. Fill gaps completely and to a minimum depth of 3/4 inch (19 mm).
 3. Ensure wet filler material is level with or slightly above the surface of insulation board.
 4. Remove excess filler from face of insulation board.

5. Allow filler to dry completely, normally 24 hours, before rasping flush with adjoining insulation boards.

3.8 BASE COAT AND REINFORCING MESH

- A. Apply base coat so as to achieve embedment of reinforcing mesh, with no reinforcing mesh color visible.
- B. Corner Grid: Install corner grid at exterior corners.
 1. Apply corner grid prior to application of reinforcing mesh.
 2. Cut corner grid to workable lengths.
 3. Apply mixed base coat to insulation board at outside corners using a stainless steel trowel.
 4. Immediately place corner grid against the wet base coat and embed the corner grid into the base coat by troweling from the corner; butt edges and avoid wrinkles.
 5. After base coat is dry and hard, apply a layer of standard or intermediate weight reinforcing mesh over the entire surface of the corner grid.
- C. Double Layer Applications:
 1. Install double layer of reinforcing mesh at the following locations:
 - a. Ground floor.
 - b. _____.
 2. First layer: Use "Flexguard 15" reinforcing mesh.
 3. First layer: Use "Flexguard 20" reinforcing mesh.
 4. Second layer: Use "Flexguard 4" reinforcing mesh.
 5. Second layer: Use "Flexguard 6" reinforcing mesh.
 6. Apply mixed base coat to entire surface of insulation board with a stainless steel trowel to a thickness that will embed the reinforcing mesh.
 7. Immediately place first layer of reinforcing mesh against wet base coat and embed the reinforcing mesh into the base coat by troweling from the center to the edges.
 8. Butt heavy duty reinforcing mesh at all adjoining edges; do not use to backwrap or bend around corners.
 9. Butt heavy duty reinforcing mesh at adjoining edges of corner grid.
 10. Ensure reinforcing mesh is free of wrinkles and embedded in base coat so that no reinforcing mesh color is visible.

11. After base coat with embedded reinforcing mesh is dry and hard (normally 8 to 10 hours), apply second layer of reinforcing mesh and base coat over the entire surface, in accordance with requirements for single layer application to achieve total nominal base coat and reinforcing mesh thickness of 3/32 inch (2.4 mm).
- D. Single Layer Applications:
1. Use standard weight mesh ("Flexguard 4") in the following locations: _____.
 2. Use standard/medium weight mesh ("Flexguard 6") in the following locations: _____.
 3. Use intermediate weight mesh ("Flexguard 10") in the following locations: _____.
 4. Apply base coat to entire surface of insulation board with a stainless steel trowel to a thickness that will embed the reinforcing mesh.
 - a. 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.
 - b. Lap reinforcing mesh 2-1/2 inches (63.5 mm), minimum, at edges.
 - c. Ensure reinforcing mesh is continuous at corners, void of wrinkles and embedded in base coat so that no reinforcing mesh color is visible.
 - d. If required, apply a second layer of base coat to achieve total nominal base coat and reinforcing mesh thickness of 1/16 inch (1.5 mm).
- E. Allow base coat with embedded reinforcing mesh to dry hard (normally 8 to 10 hours).
- F. Joint Sealant Substrate Conditioner:
1. Apply joint conditioner to the base coat reinforcing mesh in sealant joints with a high-quality, latex-type paint brush.
 2. Work continuously until a uniform appearance is obtained.
 3. Allow to dry thoroughly (approximately 24 hours) prior to application of sealant primer and sealant.
- G. Primer:
1. Apply "Senergy Tinted Primer" to base coat and reinforcing mesh with a sprayer, 3/8 inch (9.5 mm) nap roller, or good quality latex paint brush at a rate of 150 to 250 square feet per gallon (3.6-6.0 sq m/L).

2. Primer shall be dry to the touch before proceeding to finish coat application.

3.9 FINISH COAT

A. "Senergy Finish Coat":

1. Apply finish coat directly to base coat/reinforcing mesh with a clean stainless steel trowel to thickness required for type of finish coat specified.
2. Apply and level finish coat during same operation to minimum obtainable thickness consistent with uniform coverage.
3. Maintain a wet edge on finish coat by applying and texturing continually over the wall surface.
4. Work finish coat to corners, joints, or natural breaks and do not allow material to set up within an uninterrupted wall area.
5. Float finish coat to achieve final texture.

B. "Silcoat" Finish Coat:

1. Apply finish Coat directly to base coat/reinforcing mesh with a clean stainless steel trowel to thickness required for type of finish coat specified.
2. Apply and level finish coat during same operation to minimum obtainable thickness consistent with uniform coverage.
3. Maintain a wet edge on finish coat by applying and texturing continually over the wall surface.
4. Work finish coat to corners, joints, or natural breaks and do not allow material to set up within an uninterrupted wall area.
5. Float finish coat to achieve final texture.

C. "Matrix" Finish:

1. Apply finish coat directly to base coat/reinforcing mesh with a clean stainless steel trowel.
2. Apply and level finish coat to a thickness such that a minimum of 50 percent of the diameter of the stone aggregate is embedded. Maximum allowable thickness is 3/16 inch (4.8 mm); minimum allowable thickness is 1/16 in (1.5 mm).
3. Maintain a wet edge on finish coat by applying and texturing continually over the wall surface.
4. Work finish to corners, joints, or natural breaks and do not allow material to set up within an uninterrupted wall area.
5. Immediately embed (hand seed) the stone aggregate into the finish until uniform coverage is achieved.

6. Tamp the stone aggregate into place so that a minimum of 50 percent of the aggregate is embedded into the finish coat.
- D. "Aurora Stone" Finish System:
1. Apply tinted primer to substrate and allow to dry to the touch.
 2. Apply matrix and aggregate using spray gun and hopper.
 3. Apply two coats of matrix and aggregate.
 4. Work to corners, joints, or natural breaks and do not allow material to set up within an uninterrupted wall area.
 5. Allow first coat to dry completely before applying second coat.
 6. Double-back second coat to achieve the desired finish appearance.
 7. Apply to total thickness of between 1/16 inch (1.6 mm) and 1/8 inch (3.2 mm).
- E. "Aurora TC-100" Finish Coat:
1. Primer: Apply primer prior to application of certain finish colors when recommended by the manufacturer.
 - a. Apply "Senergy Tinted Primer" to the base coat/reinforcing mesh with a sprayer, 3/8 inch (9.5 mm) nap roller, or good-quality latex paint brush at a rate of approximately 150 to 250 sq ft per gallon (3.6-6.0 sq m/L).
 - b. Primer shall be dry to the touch before proceeding to the finish coat application.
 2. Apply a tight coat of finish coat directly to base coat/reinforcing mesh with a clean stainless steel trowel.
 3. Maintain a wet edge on finish coat by applying and leveling continually over the wall surface.
 4. Work finish coat to corners, joints, or natural breaks and do not allow material to set up within an uninterrupted wall area.
 5. Allow to set until surface is completely dry prior to applying a second coat.
 6. For a smooth appearance, use a stainless steel trowel and apply the second coat. Achieve final texture using circular motions.
 7. For a textured appearance, apply the second coat using a spray gun and hopper. Double back to achieve final texture.

8. Total thickness of finish coat shall be approximately 1/16 inch (1.5 mm).

F. "Borealis" Finish Coat:

1. Primer: Apply primer prior to application of certain finish colors when recommended by the manufacturer.
 - a. Apply "Senergy Tinted Primer" to the base coat/reinforcing mesh with a sprayer, 3/8 inch (9.5 mm) nap roller, or good-quality latex paint brush at a rate of approximately 150 to 250 sq ft per gallon (3.6-6.0 sq m/L).
 - b. Primer shall be dry to the touch before proceeding to the finish coat application.
2. Apply a tight coat of finish coat directly to base coat/reinforcing mesh with a clean stainless steel trowel.
3. Maintain a wet edge on finish coat by applying and leveling continually over the wall surface.
4. Work finish coat to corners, joints, or natural breaks and do not allow material to set up within an uninterrupted wall area.
5. Allow to set until surface is completely dry prior to applying a second coat.
6. For a smooth appearance, use a stainless steel trowel and apply the second coat. Achieve final texture using circular motions.
7. For a textured appearance, apply the second coat using a spray gun and hopper. Double back to achieve final texture.
8. Total thickness of finish coat shall be approximately 1/16 inch (1.5 mm).

3.10 CLEANING AND PROTECTION

- A. Clean adjacent surfaces and remove excess material, droppings, and debris.
- B. Remove scraps and debris from the site; leave in a neat, clean condition.
- C. Protect work from damage until Substantial Completion.

END OF SECTION