



## Senerflex® Vulcan NC System

*Polymer-based EIFS with vertical drainage channels, mineral wool insulation and an air/water-resistive barrier*

### 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 Senergy® typical details, product bulletins, technical bulletins, etc.

### 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. BASF Corporation - Wall Systems (herein referred to as "BASF Wall Systems") has prepared guidelines in the form of specifications, typical application details, and product bulletins to facilitate the design process only. BASF Wall Systems 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 BASF Wall Systems or otherwise, or for any changes which the purchasers, specifiers, designers or their appointed representatives may make to BASF Wall Systems published comments.

### DESIGNING AND DETAILING A SENERFLEX VULCAN NC 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/240 under positive or negative 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, Fiberock® Aqua-Tough™ sheathing, ASTM C1177 type sheathing including e<sup>2</sup>XP™ sheathing, GlasRoc® sheathing, Securock™ glass-mat sheathing, DensGlass™ exterior sheathing, GreenGlass sheathing, Weather Defense Platinum sheathing, Exposure I or exterior plywood (Grade C/D or better), or Exposure I OSB.
2. Painted and otherwise coated surfaces of brick, unit masonry, and concrete shall be inspected and prepared as approved by BASF Wall Systems before application. The applicator shall verify that the proposed substrate is acceptable prior to the Senerflex Vulcan NC System installation.
3. The substrate systems shall be engineered with regard to structural performance by others.

#### C. Moisture Control

1. Prevent the accumulation of water behind the EIF 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, at the base of the wall and anywhere else required by local code or design at the time of installation.
  - [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.

#### D. 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 and where structural movement is anticipated. It is the sole responsibility of the project design team, including the architect, engineer, etc., to ultimately determine specific expansion joint placement, width and design. Detail specific locations in construction drawings.
2. Sealant joints are required at all penetrations through the Senerflex Vulcan NC (windows, doors, etc.)
3. Specify compatible closed cell backer rod and acceptable sealant that has been evaluated in accordance with ASTM C 1382, "Test Method for Determining Tensile Adhesion Properties of Sealants When Used in Exterior Insulation and Finish System (EIFS) Joints," and that meets minimum 50% elongation after conditioning.
4. The system must be properly terminated (back-wrapped a min. of 2", properly sealed, flashed) at all penetrations, lighting fixtures, electrical outlets, hose bibs, dryer vents, etc.

#### E. Grade Condition

1. The Senerflex Vulcan NC System is not intended for use below grade or on surfaces subject to continuous or intermittent immersion in water or hydrostatic pressure. Ensure a minimum 8" (203.2 mm) clearance above grade or as required by code, a minimum 1" (25.4 mm) clearance above finished grade (sidewalk/concrete flatwork).

#### F. Trim, Projecting Architectural Features

**(NOTE TO SPECIFIER: Installation of the Senergy Wall System outside the slope guidelines referenced in this specification may still qualify for a standard warranty; however, increased maintenance and premature deterioration of the system shall be expected and any deleterious affects caused by the lack of slope will not be the responsibility of BASF Wall Systems. The design professional has the option to build according to his/her project needs. The design professional must also consider geography, climate, building orientation, wall orientation and adjacent building components when designing with EIFS. 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.)**

1. Minimum slope for all projections shall be 6:12 (27°) with a maximum length of 30.5 cm (12") [e.g. 15 cm in 30.5 cm (6" in 12")]. Increase slope for northern climates to prevent accumulation of ice/snow on the surface.
2. Senergy 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.
3. Low sloping EIFS conditions are subject to more extreme heat. Low sloped areas are known to produce an increase in wall surface temperature. This design can lead to accelerated weathering of the low sloped surface.

#### G. 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. Install air seals between the primary Air/Water Resistive barrier and other wall components (penetrations, etc.) in order to maintain continuity of an air barrier system.
3. Provide site grading such that Senerflex Vulcan NC System terminates a minimum of 8" (203 mm) above finished grade or as required by code.
4. Provide protection of rough openings in accordance with *Senergy® Moisture Protection Guidelines for Senerflex Wall Systems* bulletin before installing windows, doors, and other penetrations through the wall.
5. Install copings and sealant immediately after installation of the Senerflex Vulcan NC System and when Senergy coatings are completely dry.

## **TECHNICAL INFORMATION**

Consult BASF Wall Systems' Technical Services Department for specific recommendations concerning all other applications. Consult the Senergy website, [www.senergy.basf.com](http://www.senergy.basf.com), for additional information about products and systems and for updated literature.

## **PART 1 - GENERAL**

### **1.01 SECTION 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 or not such work is specifically mentioned herein.
- B. Senerflex Vulcan NC System: Composite wall Exterior Insulation and Finish System consisting of Adhesive, mineral wool insulation, Base Coat, Reinforcing Mesh, and Finish Coat applied over an air/water resistive barrier
- C. Senergy 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.
- D. The system type shall be Senerflex Vulcan NC System as manufactured by BASF Corporation – Wall Systems, Jacksonville, Florida, herein after referred to as “BASF Wall Systems”.

**NOTE TO SPECIFIER: Items in brackets indicate a system option or choice of options. Throughout the specification, delete those which are not required or utilized. Contact BASF Wall Systems Technical Service Department for further assistance.**

### **1.02 RELATED 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 11 00 Wood framing
- E. Section 06 16 00 Sheathing
- 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

### **1.03 DEFINITIONS**

- A. Exterior Insulation and Finish System: Exterior assembly comprised of Adhesive, rigid insulation, 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 reinforcing material is glass fiber mesh, which is embedded into the Base Coat at the time of installation. The Base Coat shall be applied so as to achieve Reinforcing Mesh embedment with no Reinforcing Mesh color visible, nominal thickness of 1.6 mm (1/16”). Protective Finish Coats, of various thicknesses, in a variety of textures and colors, are applied over the Base Coat.

### **1.04 SUBMITTALS**

- A. Submit under provisions of Section [01 33 00]
- B. Product Data: Provide data on Senerflex Vulcan NC System materials, product characteristics, performance criteria, limitations and durability.
- C. Samples: Submit [two] [ x ] [millimeter] [inch] size samples of Senerflex Vulcan NC System illustrating Finish Coat color and texture range.

- D. Certificate: System manufacturer's approval of applicator.
- E. Sealant: Sealant manufacturer's certificate of compliance with ASTM C1382.
- F. System manufacturer's product literature which indicates preparation required, storage, installation techniques, jointing requirements and finishing techniques.

#### **1.05 QUALITY ASSURANCE**

- A. Manufacturer: More than 10 years in the EIFS industry, with more than 1000 completed EIFS projects.
- B. Applicator: Approved by BASF Wall Systems in performing work of this section.
- C. Regulatory Requirements: Conform to applicable code requirements for exterior insulation and finish system.
- D. Field Samples
  - 1. Provide under provisions of Section [01 43 36] [01 43 39].
  - 2. Construct one field sample panel for each color and texture, [ x ] [meters] [feet] in size of system materials illustrating method of attachment, surface Finish color and texture.
  - 3. Prepare each sample panel using the same tools and techniques to be used for the actual application.
  - 4. Locate sample panel where directed.
  - 5. Accepted sample panel [may] [may not] remain as part of the work.
  - 6. Field samples shall be comprised of all wall assembly components including substrate, Air/Water Resistive barrier, insulation board, Base Coat, Reinforcing Mesh, primer (if specified), Finish Coat, and typical sealant/flashing conditions.

#### **1.06 DELIVERY, STORAGE AND HANDLING**

- A. Deliver, store and handle products under provisions of Section [01 65 00] [01 66 00] [ ].
- B. Deliver Senerflex Vulcan NC System materials in original unopened packages with manufacturer's labels intact.
- C. Protect Senerflex Vulcan NC System materials during transportation and installation to avoid physical damage.
- D. Store Senerflex Vulcan NC System materials in cool, dry place protected from exposure to moisture and freezing.
- E. Store at no less than 4°C/40°F (10°C/50°F for AURORA STONE, TC-100, ALUMINA and BOREALIS Finish). Store insulation boards flat and protected from direct sunlight and extreme heat.
- F. Store Senerflex Vulcan NC System Reinforcing Mesh, SHEATHING FABRIC and SENERFLASH™/SENERWRAP flexible flashing in cool, dry place protected from exposure to moisture.

#### **1.07 PROJECT/SITE CONDITIONS**

- A. Do not apply Senerflex Vulcan NC System in ambient temperatures below 4°C/40°F (10°C/50°F for AURORA STONE, TC-100, ALUMINA and BOREALIS Finish).
- B. Provide properly vented, supplementary heat during installation and drying period when temperatures less than 4°C/40°F (10°C/50°F for AURORA STONE, TC-100, ALUMINA and BOREALIS Finish) prevail.
- C. Do not apply Senerflex Vulcan NC System materials to frozen surfaces.
- D. Maintain ambient temperature at or above 4°C/40°F (10°C/50°F for AURORA STONE, TC-100, ALUMINA and BOREALIS Finish) during and at least 24 hours after Senerflex Vulcan NC System installation and until dry.

#### **1.08 SEQUENCING AND SCHEDULING**

- A. Coordinate and schedule installation of Senerflex Vulcan NC 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 BASF Wall Systems five-year limited materials warranty for Senerflex Vulcan NC System installations under provisions of Section [01 70 00].
1. Comply with BASF Wall Systems project review requirements and notification procedures to assure qualification for warranty.

## PART 2 - PRODUCTS

### 2.01 MANUFACTURERS

Senerflex® Vulcan NC System (Class PB System) manufactured by BASF Wall Systems.

### 2.02 MATERIALS

**NOTE TO SPECIFIER: Keep only the products in this section which will be incorporated in the Senergy Vulcan NC System. Delete those not to be utilized.**

A. Air/Water Resistive Barrier:

**NOTE TO SPECIFIER: Select SENERSHIELD® and/or SENERSHIELD-R® (most typically one or the other) in section 1 and one or more of the corresponding components listed in section 2. Delete those not utilized.**

1. [SENERSHIELD®: 100% acrylic-based, fiber-reinforced Air/Water Resistive Barrier that is field mixed with Type I or Type II Portland cement.]

- OR -

[SENERSHIELD-R®: ready-mixed, flexible Air/Water Resistive Barrier.]

2. [a. FLASHING PRIMER: water-based primer for use prior to application of SENERFLASH™ on all acceptable surfaces.  
b. SENERFLASH™: 30-mil thick, self-sealing, self-healing composite membrane of polyester fabric and rubberized asphalt. Compatible with SENERSHIELD or SENERSHIELD-R Air/Water Resistive Barrier.]  
[c. Senergy® SELF-ADHERING MESH TAPE 4: 100 mm (4") balanced, open weave glass fiber reinforcing mesh with adhesive; twisted multi-end strands treated for compatibility with system components for use with SENERSHIELD.]  
[d. FLEXGUARD 4 Mesh: 100 mm (4") balanced, open weave glass fiber Reinforcing Mesh; twisted multi-end strands treated for compatibility with system components for use with SENERSHIELD.]  
[e. 4" SHEATHING FABRIC: 100 mm (4") spunbonded non-woven reinforced polyester web for use with SENERSHIELD-R.]

B. Adhesives/Base Coats

1. ALPHA DRY Base Coat: Dry-mix base coat containing Portland cement; manufactured by BASF Wall Systems.

**NOTE TO SPECIFIER: Portland cement is not used with Senershield-R or Alpha Dry Base Coat.**

[C. Portland cement: Conform to ASTM C150, Type I, II, or I/II, grey or white; fresh and free of lumps.]

D. Water: Clean and potable without foreign matter.

E. Insulation Board: mineral wool insulation:

- [1. Roxul® Lamella strip boards, 152 x 1220 mm (6 in x 48 in), with a nominal density of 6.0 lb./ft<sup>3</sup> (96 kg/m<sup>3</sup>), tested per CAN/ULC S114 (ASTM E136) – noncombustible; CAN/ULC S102 (ASTM E84) – flame spread less than 25]
- [2. Slab type insulation, 610 x 1220 mm (24 in x 48 in), having a minimum density of 8.0 lb/ft<sup>3</sup> (128 kg/m<sup>3</sup>). RockBoard 80 by Roxul, or 1210CR by Fibrex, tested per CAN/ULC S114 (ASTM E136) – noncombustible; CAN/ULC S102 (ASTM E84) – flame spread less than 25]

F. Mechanical fasteners

1. ULP-302 by Wind-Lock Corp high density plastic washers, 44 mm (1 ¾ inches) in diameter, used in combination with corrosion resistant screws that are suitable for the substrate.

G. Senergy Reinforcing Mesh: Balanced, open weave glass fiber reinforcing mesh; twisted multi-end strands treated for compatibility with Senerflex Vulcan NC System components. **NOTE TO SPECIFIER: Select required mesh; delete those that are not to be utilized.**

1. FLEXGUARD 4: standard weight, 4 oz.]
- [2. INTERMEDIATE 6: standard/medium weight, 6 oz.]
- [3. INTERMEDIATE 12: intermediate weight, 12 oz.]

[4. STRONG 15: heavy weight, 15 oz. used only in combination with Flexguard 4 or Intermediate 6.]  
[5. HI-IMPACT 20: heavy weight, 20 oz. used only in combination with Flexguard 4 or Intermediate 6.]

[6. CORNER MESH: Intermediate weight, pre-marked for easy bending, for reinforcing at exterior corners.]

[H. [ASAP]: 100% acrylic-based coating; as manufactured by BASF Wall Systems.]

[I. [COLOR COAT]: 100% acrylic-based coating; as manufactured by BASF Wall Systems.]

[J. TINTED PRIMER: 100% acrylic-based primer; color to closely match the selected Senergy® Finish Coat color; manufactured by BASF Wall Systems.]

K. Senergy Finish Coat:

**NOTE TO SPECIFIER: Select one of the following finish types and textures. Delete those that are not to be utilized.**

1. [SENERFLEX 100% acrylic polymer based finish; air cured, compatible with Base Coat; Finish color; color [ ] as selected; Finish texture [CLASSIC] [FINE] [TEXTURE] [COARSE] [SAHARA] [BELGIAN LACE] [ENCAUSTO VERONA] [METALLIC] [BOREALIS] [AURORA TC-100] [AURORA STONE] [ALUMINA™] as scheduled; as manufactured by BASF Wall Systems.]

- OR -

1. [SILCOAT®] Finish: Siliconized acrylic emulsion finish coat; air cured, Finish color factory-mixed; color [ ] selected; Finish texture [CLASSIC] [FINE] [TEXTURE] [SAHARA] [BELGIAN LACE] as scheduled; as manufactured by BASF Wall Systems.]

[L. BASF Wall System's AnticoGlaze™: 100% acrylic stain, manufactured by BASF Wall Systems.]

## 2.03 ACCESSORIES

A. Window/Door Drip Edge: Rigid polyvinyl chloride (PVC), UV resistant for exterior use, with a drip edge, as furnished by Plastic Components, Inc. or equal. Accessories shall conform to ASTM D1784-97, C1063-99 and D4216-99.

## PART 3 - EXECUTION

### 3.01 EXAMINATION

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

B. Walls

1. Substrates

a. Trowel applied Air/Water Resistive barrier acceptable substrates: PermaBase® brand cement board (or other ASTM C1325 Type A Exterior approved cement boards), poured concrete/unit masonry, Fiberock® Aqua-Tough™ sheathing, ASTM C1177 type sheathing including e<sup>2</sup>XP™ sheathing, GlasRoc® sheathing, Securock™ glass-mat sheathing, DensGlass™ exterior sheathing, GreenGlass sheathing, Weather Defense Platinum sheathing, gypsum sheathing (ASTM C79/C1396). Consult the BASF Wall Systems Technical Services Department for all other applications.

b. Roller applied Air/Water Resistive barrier acceptable substrates: PermaBase® brand cement board (or other ASTM C1325 Type A Exterior approved cement boards), poured concrete/unit masonry, Fiberock Aqua-Tough™ sheathing, ASTM C1177 type sheathing including e<sup>2</sup>XP™ sheathing, GlasRoc® sheathing, Securock™ glass-mat sheathing, DensGlass™ exterior sheathing, GreenGlass sheathing, Weather Defense Platinum sheathing, gypsum sheathing (ASTM C79/C1396), Exposure 1 or exterior plywood sheathing (Grade C-D or better), Exposure 1 OSB. Consult the BASF Wall Systems Technical Services Department for all other applications.

c. Wall sheathing must be securely fastened per applicable building code and sheathing manufacturer's requirements.

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

2. Flashings

a. All flashings are by others and must be installed in accordance with specific manufacturer's requirements. Where appropriate, end-dams must be provided.

- b. Openings must be flashed prior to window/door, HVAC, etc. installation. Refer to SENERFLASH™ product bulletin and *Senergy® Moisture Protection Guidelines for Senerflex Wall Systems* bulletin for further information.
  - c. Windows and openings shall be flashed according to 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. 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.
- 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 Senerflex Vulcan NC System.
- B. Protect finished work at end of each day to prevent water penetration.
- C. Substrate preparation: Prepare substrates in accordance with Senergy instructions.

### 3.03 MIXING

General: No additives are permitted unless specified in product mixing instructions. Close containers when not in use. Prepare in a container and/or mixer that is clean and free of foreign substances. Do not use a container and/or mixer 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 will be incorporated in the Senerflex Vulcan NC System. Delete those not to be utilized.**

- A. Air/Water Resistive Barrier
  - 1. [SENERSHIELD]
    - a. Mix SENERSHIELD with a clean, rust-free paddle and drill until thoroughly blended before adding Portland cement.
    - b. Mix one part (by weight) Portland cement with one part SENERSHIELD. Add Portland cement in small increments, mixing until thoroughly blended after each additional increment.
    - c. A small amount of clean, potable water per mixed pail (30 lbs of SENERSHIELD) may be added to adjust workability. Do not overwater.
  - 2. [SENERSHIELD-R]
    - a. Mix SENERSHIELD-R with a clean, rust-free paddle and drill until thoroughly blended. Do not add water.
- B. Senergy Base Coat
  - 1. ALPHA DRY Base Coat
    - a. Mix and prepare each bag in a 19-liter (5-gallon) pail.
    - b. Fill the container with approximately 5.6-liters (1.5-gallons) of clean, potable water.
    - c. Add ALPHA DRY Base Coat in small increments, mixing after each additional increment.
    - d. Mix ALPHA DRY Base Coat and water with a clean, rust-free paddle and drill until thoroughly blended.
    - e. Additional ALPHA DRY Base Coat or water may be added to adjust workability.
- C. Senergy [ASAP], [TINTED PRIMER], [COLOR COAT], [ANTICOGLAZE™] and [SENERFLEX], [SILCOAT®], [ENCAUSTA VERONA] Finish Coats
  - 1. Mix the factory-prepared material with a clean, rust-free paddle and drill until thoroughly blended.
  - 2. A small amount of clean, potable water may be added to adjust workability. **Do not overwater.**
  - 3. Additives are not permitted.
  - 4. Close container when not in use.
  - 5. Clean tools and equipment with water immediately after use. Dried material can only be removed mechanically.
- D. Senergy [AURORA TC-100], [BOREALIS], [AURORA STONE] and [ALUMINA] Specialty Finish Coats
  - 1. Gently mix the contents of the pail for 1 minute using a low RPM 1/2 inch drill equipped with a mixing paddle such as a Demand Twister or a Windlock B-MEW, B-M1 or B-M9.
  - 2. Additives are not permitted.

3. Close container when not in use.
4. Clean tools and equipment with water immediately after use. Dried material can only be removed mechanically.

### 3.04 APPLICATION

General: Apply Senerflex® Vulcan NC System materials in accordance with Senerflex Vulcan NC System Specifications.

#### A. Accessories:

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

#### B. Air/Water Resistive Barrier

1. All sheathing joints and windows/openings must be protected and the Air/Water Resistive barrier applied in accordance with Senergy® Moisture Protection Guidelines technical bulletin.
2. Substrate shall be dry, clean, sound, and free of releasing agents, paint, or other residue or coatings. Verify substrate is flat, free of fins or planar irregularities greater than 6.4 mm in 3 m (1/4" in 10').
3. Unsatisfactory conditions shall be corrected before application of the SENERSHIELD/SENERSHIELD-R.
4. [Apply the [FLASHING PRIMER/SENERFLASH 4 / 9] [SELF-ADHERING MESH TAPE/SENERSHIELD] [FLEXGUARD 4 Reinforcing Mesh/SENERSHIELD] in accordance with SENERSHIELD product bulletin.]

-OR -

4. [Apply the [4" SHEATHING FABRIC/SENERSHIELD-R] in accordance with the SENERSHIELD-R product bulletin.]
5. Installed materials should be checked before continuing system application.
6. Ensure [FLEXGUARD 4 Reinforcing Mesh/SENERSHIELD] [FLASHING PRIMER/SENERFLASH/SENERSHIELD] [SELFADHERING MESH TAPE/SENERSHIELD] [4" SHEATHING FABRIC/SENERSHIELD-R] overlaps the top flange of the starter track.

#### C. Insulation Board:

##### [1. Roxul Lamella

- a. Ensure fiber orientation is perpendicular to the substrate
- b. Begin at base of wall with firm, temporary support or spacer.
- c. Apply lamella horizontally in a running bond pattern.
- d. Pre-cut lamella to fit openings and projections. Lamella must be a single piece around corners of openings. Stagger vertical joints and corners. Stagger lamella and sheathing board joints.
- e. Apply mixed ALPHA DRY Base Coat to entire surface of lamella using a stainless steel trowel with 13 mm x 13 mm (1/2"x 1/2") notches spaced 50 mm (2") apart. Ribbons of adhesive must be applied parallel to the 152 mm (6") dimension of the lamella to ensure they are vertical when the lamella is applied to the substrate.
- f. Immediately set lamella into place and apply pressure over entire surface to ensure positive uniform contact and high initial grab. Do not slide lamella into place. Do not allow Base Coat to dry prior to installing.
- g. Abut all joints tightly and ensure overall flush level surface.
- h. Check adhesion periodically by removing lamella prior to set. Properly installed lamella will be difficult to remove and Senerflex Adhesive/Base Coat will be adhered to both the SENERSHIELD/SENERSHIELD-R and the lamella.
- i. Install 2 mechanical fasteners through lamella into the framing or structural substrate in each piece of insulation in the first course and every fourth course after
- i. Allow application of lamella to dry (normally 8 to 10 hours) prior to application of Base Coat/Reinforcing Mesh.]

##### [1. Slab type insulation

- a. Begin at base of wall with firm, temporary support or spacer.
- b. Apply insulation board horizontally in a running bond pattern.
- c. Pre-cut insulation board to fit openings and projections. Insulation board must be a single piece around corners of openings. Stagger vertical joints and corners. Stagger insulation board and sheathing board joints.



- d.. Apply mixed ALPHA DRY Base Coat to entire surface of insulation board using a stainless steel trowel with 13 mm x 13 mm (1/2"x 1/2") notches spaced 50 mm (2") apart. Ribbons of adhesive must be applied parallel to the 610 mm (24") dimension of the insulation board to ensure they are vertical when the insulation board is applied to the substrate.
  - e. Immediately set insulation board into place and apply pressure over entire surface to ensure positive uniform contact and high initial grab. Do not slide insulation board into place. Do not allow Base Coat to dry prior to installing.
  - f. Abut all joints tightly and ensure overall flush level surface.
  - g. Check adhesion periodically by removing insulation board prior to set. Properly installed insulation board will be difficult to remove and Senerflex Adhesive/Base Coat will be adhered to both the SENERSHIELD/SENERSHIELD-R and the insulation board.
  - h. Install mechanical fasteners through insulation board after adhesive application and after reinforced base coat application.
  - i. Install mechanical fasteners at not more than 300 mm (12") o.c. vertically and 400 mm (16") o.c. horizontally, or at a spacing equivalent to the spacing of building framing members.
  - j. Install fasteners along termination points within 150 mm (6") of the edge and spaced not more than 300 mm (12") o.c.
  - k. Where installation occurs over frame construction, ensure fasteners are installed into the framing members.
  - l. Install 50% of the fasteners after adhesive application of the insulation board and the remaining 50% of the fasteners after the installation of the initial reinforced base coat.
  - m. Install fasteners to a depth to leave the anchor plate flush or slightly recessed from the surface of the insulation, maximum recess of 1.6 mm (1/16").
- D. Senergy® Base Coat/Reinforcing Mesh: Base Coat shall be applied so as to achieve Reinforcing Mesh embedment with no Reinforcing Mesh color visible.

**NOTE TO SPECIFIER: Indicate on drawings the required locations of standard, medium and high or ultra high impact reinforcing mesh.**

[1. Senergy CORNER MESH

- a. Install CORNER MESH at corners.
- b. Apply CORNER MESH prior to application of Reinforcing Mesh.
- c. Cut CORNER MESH to workable lengths.
- d. Apply mixed ALPHA DRY Base Coat to insulation board at outside corners using a stainless steel trowel.
- e. Immediately place CORNER MESH against the wet Base Coat and embed the CORNER MESH into the Base Coat by troweling from the corner; butt edges and avoid wrinkles.
- f. After Base Coat is dry and hard, apply a layer of FLEXGUARD 4, INTERMEDIATE 6 or 12 Reinforcing Mesh over the entire surface of the CORNER MESH in accordance with 3.04 C.2.]

[2. Standard Impact or Medium Impact Resistance Reinforcing Mesh.

- a. Install [FLEXGUARD 4] [INTERMEDIATE 6] [INTERMEDIATE 12] where indicated on drawings.
- b. Apply mixed ALPHA DRY Base Coat to entire surface of insulation board with a stainless steel trowel to embed the Reinforcing Mesh.
- c. Immediately place [FLEXGUARD 4] [INTERMEDIATE 6] [INTERMEDIATE 12] Reinforcing Mesh against wet Base Coat and embed the Reinforcing Mesh into the Base Coat by troweling from the center to the edges.
- d. Lap Reinforcing Mesh 64 mm (2 1/2") minimum at edges.
- e. Ensure Reinforcing Mesh is continuous at corners, void of wrinkles and embedded in Base Coat so that no Reinforcing Mesh color is visible.
- f. If required, apply a second layer of Base Coat to achieve total nominal Base Coat/Reinforcing Mesh thickness of 1.6 mm (1/16").
- g. Allow Base Coat with embedded Reinforcing Mesh to dry hard (normally 8 to 10 hours).

[3. High Impact or Ultra High Impact Resistance Reinforcing Mesh

**NOTE TO SPECIFIER: Where High Impact or Ultra High Impact is specified, Flexguard 4 or Intermediate 6 must be specified also.**

- a. Install [INTERMEDIATE 12 & FLEXGUARD 4] [INTERMEDIATE 12 & INTERMEDIATE 6] [STRONG 15 & FLEXGUARD 4] [STRONG 15 & INTERMEDIATE 6] [HI-IMPACT 20 &

- FLEXGUARD 4] [HIIMPACT 20 & INTERMEDIATE 6] Reinforcing Mesh where indicated on drawings.
- b. Apply mixed ALPHA DRY Base Coat to entire surface of insulation board with a stainless steel trowel to embed the Reinforcing Mesh.
  - c. Immediately place [INTERMEDIATE 12] [STRONG 15] [HI-IMPACT 20] Reinforcing Mesh against wet Base Coat and embed the Reinforcing Mesh into the Base Coat by troweling from the center to the edges.
  - d. Butt [INTERMEDIATE 12] [STRONG 15] [HI-IMPACT 20] Reinforcing Mesh at all adjoining edges; do not use to back wrap or bend around corners.
  - e. Butt [INTERMEDIATE 12] [STRONG 15] [HI-IMPACT 20] Reinforcing Mesh at adjoining edges of CORNER MESH.
  - f. Ensure Reinforcing Mesh is free of wrinkles and embedded in Base Coat so that no Reinforcing Mesh color is visible.
  - g. After Base Coat with embedded Reinforcing Mesh is dry and hard (normally 8 to 10 hours), apply a layer of [FLEXGUARD 4] [INTERMEDIATE 6] Reinforcing Mesh over the entire surface in accordance with 3.04 D.2 to achieve total nominal Base Coat/ Reinforcing Mesh thickness of 2.4 mm (3/32").]
- E. Final Base Coat
1. Spot all exposed fasteners (fasteners on outside of reinforced base coat) with mixed ALPHA DRY Base Coat prior to application of final layer of ALPHA DRY Base Coat. Multiple coats of Base Coat may be required to achieve a flat surface.
- F. Senergy [ASAP] [COLOR COAT]
1. Apply material to the Base Coat/Reinforcing Mesh in sealant joints with a high-quality, latex-type paintbrush.
  2. Work material continuously until a uniform appearance is obtained.
  3. Allow to dry thoroughly (approximately 24 hours) prior to application of sealant primer and sealant.]
4. Senergy TINTED PRIMER
- a. Apply TINTED PRIMER to the Base Coat/Reinforcing Mesh with a sprayer, 10 mm (3/8") nap roller, or good quality latex paint brush at a rate of approximately 3.6–6.1 m<sup>2</sup> per liter (150–250 ft<sup>2</sup> per gallon).
  - b. TINTED PRIMER shall be dry to the touch before proceeding to the Senergy Finish Coat application.]
- G. Senergy Finish Coat
- [1. SENERFLEX<sup>®</sup> FINISH: [CLASSIC] [FINE] [TEXTURE] [COARSE] [SAHARA] [BELGIAN LACE] [ENCAUSTO VERONA] [METALLIC].
- OR -
- [1. SILCOAT<sup>®</sup> Finish: [CLASSIC] [FINE] [TEXTURE] [SAHARA] [BELGIAN LACE].
- a. Apply Finish directly to the Base Coat with a clean, stainless steel trowel.
  - b. Apply and level Finish during the same operation to minimum obtainable thickness consistent with uniform coverage.
  - c. Maintain a wet edge on Finish by applying and texturing continually over the wall surface.
  - d. Work Finish to corners, joints or other natural breaks and do not allow material to set up within an uninterrupted wall area.
  - e. Float Finish to achieve final texture.
- [2. [AURORA TC-100] [BOREALIS] Finish Coat
- a. Apply TINTED PRIMER to substrate in accordance with current Senergy TINTED PRIMER product bulletin.
  - b. TINTED PRIMER shall be of corresponding color for selected [AURORA TC-100] [BOREALIS] Finish color. Allow TINTED PRIMER to dry to the touch before proceeding to [AURORA TC-100] [BOREALIS] Finish application.
  - c. Apply a tight coat of Finish with a clean, stainless steel trowel.
  - d. Maintain a wet edge on Finish by applying and leveling continually over the wall surface.
  - e. Work Finish to corners, joints or other natural breaks and do not allow material to set up within an uninterrupted wall area. Allow first coat to set until surface is completely dry prior to applying a second coat of Finish.

- f. For a smooth appearance, use a stainless steel trowel and apply the second coat of Finish. Achieve final texture using circular motions.
- g. For a textured appearance, apply the second coat of Finish using a spray gun and hopper. Double-back to achieve final texture.
- h. Total thickness of Finish shall be approximately 1.6 mm (1/16”).

[3. AURORA STONE Finish

- a. Apply TINTED PRIMER to substrate in accordance with current Senergy® TINTED PRIMER product bulletin.
- b. TINTED PRIMER shall be of corresponding color for selected AURORA STONE Finish color. Allow TINTED PRIMER to dry to the touch before proceeding to AURORA STONE Finish application.
- c. Apply a coat of AURORA STONE Finish using a spray gun and hopper, maintaining a wet edge. Work to corners, joints or other natural breaks and do not allow material to set up within an uninterrupted wall area.
- d. Allow first coat of AURORA STONE Finish to set until surface is completely dry prior to applying a second coat of AURORA STONE Finish.
- e. Apply a second coat of AURORA STONE Finish using a spray gun and hopper; double back to achieve final texture.
- f. Thickness of AURORA STONE Finish may vary between 1.6 mm (1/16”) and 3.2 mm (1/8”), depending upon texture.

**Note: Spraying of AURORA STONE Finish should be in the same manner and direction and by the same mechanic on a particular elevation or project whenever possible, to maintain a uniform appearance. Maintain consistent air pressure to minimize texture variations. Stator or rotor design pumps are not recommended.]**

[4. ALUMINA™ Finish Coat

- a. Apply TINTED PRIMER to substrate in accordance with current Senergy® TINTED PRIMER product bulletin. TINTED PRIMER shall be of corresponding color for selected [ALUMINA™] Finish color. Allow TINTED PRIMER to dry to the touch before proceeding to [ALUMINA™] Finish application.
- b. Apply a tight coat of Finish with a clean, stainless steel trowel.
- c. Maintain a wet edge on Finish by applying and leveling continually over the wall surface.
- d. Work Finish to corners, joints or other natural breaks and do not allow material to set up within an uninterrupted wall area. Allow first coat to set until surface is completely dry prior to applying a second coat of Finish.
- e. Use a stainless steel trowel and apply the second coat of Finish. Achieve final texture using circular motions.
- f. Total thickness of Finish may be between 1.6 mm (1/16”) and 3.2 mm (1/8”).

[H. BASF Wall System’s ANTICOGLAZE™:

- 1. Apply BASF Wall System’s ANTICOGLAZE™ in accordance with recommendations contained in current product literature.]

### 3.05 CLEANING

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

### 3.06 PROTECTION

- A. Protect base coat from rain, snow and frost for 48–72 hours following application.
- B. Protect installed construction under provisions of Section [01 76 00] [ ].

**Note**

BASF Wall Systems is an operating unit of BASF Corporation (herein after referred to as "BASF Wall Systems")

**Disclaimer**

This information and all further technical advice are based on BASF's present knowledge and experience. However, BASF assumes no liability for providing such information and advice including the extent to which such information and advice may relate to existing third party intellectual property rights, especially patent rights. In particular, BASF disclaims all CONDITIONS AND WARRANTIES, WHETHER EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE OR MERCHANTABILITY. BASF SHALL NOT BE RESPONSIBLE FOR CONSEQUENTIAL, INDIRECT OR INCIDENTAL DAMAGES (INCLUDING LOSS OF PROFITS) OF ANY KIND. BASF reserves the right to make any changes according to technological progress or further developments. It is the customer's responsibility and obligation to carefully inspect and test any incoming goods. Performance of the product(s) described herein should be verified by testing and carried out only by qualified experts. It is the sole responsibility of the customer to carry out and arrange for any such testing. Reference to trade names used by other companies is neither a recommendation, nor an endorsement of any product and does not imply that similar products could not be used.

BASF Wall Systems | 3550 St. Johns Bluff Road South Jacksonville, FL 32224-2614 P: 800.221.9255 F: 904. 996.6300

[www.senergy.basf.com](http://www.senergy.basf.com)

©2010 BASF Corporation  
Printed in U.S.A. 09/10