Senergy® Platinum CI Stucco Wall System - Section 092423

Specification for 2 and 3 coat impact-resistant continuously insulated (CI) premium cement plaster stucco system featuring Neopor® rigid insulation board

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. Items in brackets indicate a system option or choice of options. Throughout the specification, delete those which are not required or utilized.

DESIGN RESPONSIBILITY
It is the responsibility of both the specifier and the purchaser to determine if a product is suitable for its intended use. The designer selected by the purchaser shall be responsible for all decisions pertaining to design, detail, structural capability, attachment details, shop drawings and the like. The Wall Systems business of BASF Corporation - (hereinafter 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 SENERGY PLATINUM CI STUCCO WALL SYSTEM
General: The system shall be installed in strict accordance with current recommended published details and product specifications from the system’s manufacturer.

A. Wind Load:
   1. Maximum deflection not to exceed L/360 under 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, ASTM C1177 type sheathings including DensGlass™ exterior sheathing, eXP™ sheathing, GlasRoc® sheathing, Securock™ glass-mat sheathing, Weather Defense™ Platinum sheathing, and GreenGlass® sheathing, gypsum sheathing (ASTM C79/C1396), Exposure I or exterior plywood (Grade C/D or better), or Exposure I OSB.
   2. The substrate systems shall be engineered with regard to structural performance by others.
   3. Refer to Senergy’s Stucco Wall Systems Lath and Trim Accessories technical bulletin for more detailed information regarding metal lath, woven wire, trim requirements, etc.
   4. 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. Moisture Control:
   1. Prevent the accumulation of water behind the SENERGY PLATINUM CI STUCCO wall system, either by condensation or leakage through the wall construction, in the design and detailing of the wall assembly.
      a. Provide flashing to direct water to the exterior where it is likely to penetrate components in the wall assembly, including, above window and door heads, beneath window and door sills, at roof/wall intersections, decks, abutments of lower walls with higher walls, above projecting features, at the base of the wall and anywhere else required by local code.
      b. The water resistive barrier must be installed over the substrate according to manufacturer’s specifications and applicable building code requirements.
      c. Openings must be flashed prior to window/door, HVAC, etc. installation to provide moisture protection of the building frame and interior. Refer to Secondary Moisture Protection Barrier Guidelines for Senergy Stucco Wall System or Air/Water-Resistive/Vapor Barrier Application Guidelines technical bulletin.
D. Color Selection:
   1. The use of dark colors over NEOPOR Rigid Insulation Board trim shapes must be considered in relation to wall surface temperature as a function of local climate conditions. Select Finish Color with a light reflectance value (LRV) of 20% or higher. The use of dark colors (LRV less than 20%) is not recommended with trim shapes that incorporate NEOPOR Rigid Insulation Board. NEOPOR Rigid Insulation Board has a sustained service temperature limitation of approximately 74°C (165°F).

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

F. Decorative Shapes, Projecting Architectural Features:
   NOTE TO SPECIFIER: Installation of the SENERGY PLATINUM CI STUCCO wall system with decorative shapes that incorporate NEOPOR Rigid Insulation Board outside the slope guidelines referenced in this specification may still qualify for a standard warranty; however, increased deleterious effects caused by the lack of slope may 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 trim shapes that incorporate NEOPOR Rigid Insulation Board. 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 1:2 (27º) 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.

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

G. System Joints:
   1. Expansion joints in the system are required at building expansion joints, at prefabricated panel joints, floor lines of wood frame construction, where substrates change, at termination at dissimilar materials and where structural movement is anticipated. Detail specific locations in construction drawings.

   2. Control joints are required at a minimum of every 13m² (144ft²) of wall surface area and where specified by the design professional. The maximum uncontrolled length or width is 5.5 linear meters (18 linear feet) and a maximum uncontrolled length to width ratio of 2 ½: 1. Detail specific locations in construction drawings.

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

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

I. Coordination with other trades:
   1. Evaluate adjacent materials such as windows, doors, etc. for conformance to manufacturer’s details. Adjacent trades shall provide scaled shop drawings for review.

   2. Air seals at any joints/gaps between adjoining components (penetrations, etc.) are of primary importance to maintain continuity of an air barrier system and must be considered by the design professional in the overall wall assembly design. Air seals are needed between the primary air/water-resistive barrier and other wall components (penetrations, etc.) in order to maintain continuity of an air barrier system.

   3. Provide protection of rough openings in accordance with Senergy® Moisture Protection Guidelines for Senergy Stucco Wall System technical bulletin or Air/Water-Resistive/Vapor Barrier Application Guidelines technical bulletin before installing windows, doors, and other penetrations through the wall.

   4. Install copings and sealant immediately after installation of the SENERGY PLATINUM CI STUCCO wall 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, 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. System Description: Composite wall system consisting of water-resistive barrier; NEOPOR Rigid Insulation Board; BASF PERMALATH®, PERMALATH, or metal lath; BASF STUCCOBASE™ or STUCCOBASE™ PREMIX; BASF STUCCOPRIME (optional); and Senergy Finish.
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 SENERGY PLATINUM CI STUCCO wall system as manufactured by BASF Wall Systems, Jacksonville, Florida.

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

1.03 REFERENCES

A. ASTM C150 Standard Specification for Portland Cement
B. ASTM C926 Standard Specification for Application of Portland Cement-Based Plaster
D. ASTM C847 Standard Specification for Metal Lath
F. ASTM C1032 Standard Specification for Woven Wire Plaster Base
G. ASTM C1764 Standard Test Methods for Non Metallic Plaster Bases (Lath) used with Portland Cement Based Plaster in Vertical Applications
H. ASTM C1787 Standard Specification for Installation of Non Metallic Plaster Bases (Lath) used with Portland Cement Based Plaster in Vertical Applications
I. ASTM C1788 Standard Specification for Installation of Non Metallic Plaster Bases (Lath) used with Portland Cement Based Plaster in Vertical Applications
L. ICC-ES AC11 Cementitious Exterior Wall Coatings
M. ESR-1064 ICC Evaluation Service, LLC, ES Report™ ([BASF STUCCOBASE™] [STUCCOBASE™ PREMIX])
N. ESR-1511 ICC Evaluation Service, LLC, ES Report™ (PERMALATH)
O. ESR-2429 ICC Evaluation Service, LLC, ES Report™ (PERMALATH 1000)
1.04 SUBMITTALS
A. Submit under provisions of Section [01 33 00]
B. Product Data: Provide data on SENERGY PLATINUM CI STUCCO wall system materials, product characteristics, performance criteria, limitations and durability.
C. Code Compliance: Provide manufacturer’s applicable code compliance report.
D. Samples: Submit [two] [x] [millimeter] [inch] size samples of SENERGY PLATINUM CI STUCCO wall system illustrating Senergy Finish color and texture range.
E. Certificate: System manufacturer’s approval of applicator.
F. Sealant: Sealant manufacturer’s certificate of compliance with ASTM C920.
G. System manufacturer’s current specifications, typical details, system design guide and related product literature which indicate preparation required, storage, installation techniques, jointing requirements and finishing techniques.

1.05 QUALITY ASSURANCE
A. Manufacturer: More than 10 years in the cement plaster stucco industry, with more than 1000 completed cement plaster stucco projects.
B. Applicator: Approved by BASF Wall Systems in performing work of this section.
C. Regulatory Requirements: Conform to applicable code requirements for cement plaster stucco.
D. Field Samples
   1. Provide under provisions of Section [01 43 36] [01 43 39].
   2. Construct one field sample panel for each color and texture, [x] [meters] [feet] in size of system materials illustrating method of attachment, Senergy 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, water-resistive barrier, plaster trim accessories, NEOPOR Rigid Insulation Board, plaster base, BASF [STUCCOBASE] [STUCCOBASE PREMIX], BASF STUCCOPRIME (if specified), Senergy Finish, 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 SENERGY PLATINUM CI STUCCO wall system materials in original unopened packages with manufacturer’s labels intact.
C. Protect SENERGY PLATINUM CI STUCCO wall system materials during transportation and installation to avoid physical damage.
D. Store SENERGY PLATINUM CI STUCCO wall 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, AURORA TC-100, ALUMINA™ finish).
F. Store NEOPOR Rigid Insulation Board flat, in original packaging and protected from direct sunlight and extreme heat.

1.07 PROJECT/SITE CONDITIONS
A. Do not apply SENERGY PLATINUM CI STUCCO wall system in ambient temperatures below 4°C/40°F (10°C/50°F for AURORA STONE, AURORA TC-100, ALUMINA finish). 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, AURORA TC-100, ALUMINA finish) prevail.
B. Do not apply SENERGY PLATINUM CI STUCCO wall system materials to frozen surfaces.
C. Maintain ambient temperature at or above 4°C/40°F (10°C/50°F for AURORA STONE, AURORA TC-100, ALUMINA finish) during and at least 24 hours after SENERGY PLATINUM CI STUCCO wall system installation and until dry.

1.08 SEQUENCING AND SCHEDULING
A. Coordinate and schedule installation of SENERGY PLATINUM CI STUCCO wall system with related work of other sections.
B. Coordinate and schedule installation of trim, flashing, and joint sealers to prevent water infiltration behind the system.

1.09 WARRANTY
A. Provide BASF Wall Systems material warranty for SENERGY PLATINUM CI STUCCO wall system installations under provisions of Section [01 70 00]. Reference Senergy’s Platinum CI Warranty Schedule technical bulletin for specific information.
B. Comply with BASF Wall Systems notification procedures to assure qualification for warranty.

PART 2 - PRODUCTS
2.01 MANUFACTURERS
All components of the SENERGY PLATINUM CI STUCCO wall system shall be obtained from the system manufacturer or through an authorized distributor.

2.02 MATERIALS
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. Delete those not to be utilized.

A. Water-Resistive Barrier:

NOTE TO SPECIFIER: A water resistive barrier must be installed over sheathed substrates and wrapped into rough openings prior to installation of the Senergy Platinum CI Stucco System. Ensure specification of the appropriate number of layers of water resistive barrier according to specific substrate type. Delete those products not utilized.

1. In accordance with the 2012 IRC/IBC, non-wood based sheathings require a minimum of 1 layer of No.15 asphalt felt, complying with ASTM D226 for Type 1 felt, or other approved material.
2. In accordance with the 2012 IRC/IBC, wood based sheathings require a water-resistive vapor permeable barrier with a performance at least equivalent to 2 layers of Grade D paper. Exception: 1 layer where the water resistive barrier has a water resistance equal to or greater than 60 minute Grade D paper and is separated from the stucco by an intervening substantially non water absorbing layer or drainage space.

- OR –

[3. [SENERSHIELD-R] [SENERSHIELD-VB]: ready-mixed, flexible air/water-resistive barrier.

a. SHEATHING FABRIC: spunbonded non-woven reinforced polyester web for use with [SENERSHIELD-R] [SENERSHIELD-VB].

b. WS FLASH™/FLASHING PRIMER


2. FLASHING PRIMER: water-based primer for use prior to application of WS FLASH™ on all acceptable surfaces.]

B. NEOPOR Rigid Insulation Board: thermal resistance values R5, R 7.5, R10 or custom thickness and shapes as specified.

1. Flame spread and smoke development 25 and 450 or less respectively per ASTM E84, minimum 40 psi flexural, minimum 20 psi compressive, minimum thermal resistance 4.6/inch at 24°C (75°F), 4.9/inch at 4°C (40°F).

2. Meets or exceeds ASTM C578 Type II
3. Minimum density 23.2 Kg/m³ (1.45 pcf)
4. Aging: For air dry method, store in a minimum ambient temperature of 20°C (68°F) for a period of six (6) weeks prior to cutting. Mechanical aging shall be at a temperature of 60°C (140°F) for a period of five (5) days.

5. Maximum size 61 cm x 2.44 m x 10 cm (2' x 8').

6. Tolerances: Edges square within .08mm/0.3m (1/32”/ft.), width 61cm (+/-) 1.6mm (24” (+/-) 1/16”) and length 2.44m (+/-) 3mm (96” (+/-) 1/8”)

7. For open framing installations, insulation board shall be tongue and groove with 9.5 mm (3/8”) high tongues and compatible grooves.

8. Channeled NEOPOR Rigid Insulation Board: For solid sheathed or backed installations with water resistive barrier other than Tyvek StuccoWrap or DrainWrap or [Senershield-R] [Senershield-VB] insulation board
SENERGY PLATINUM CI STUCCO

shall have 25mm (1") wide by 6mm (1/4") deep grooves vertically spaced 305mm (12") on center on the back surface of the insulation board parallel to the 61cm (2") dimension.

C. Lath:
(See also, Senergy Lath & Trim Accessories System support bulletin)

NOTE TO SPECIFIER: Ensure selection of the appropriate Lath based on specified thickness of the SENERGY PLATINUM CI STUCCO wall system. Delete those products not utilized.

[1. PERMALATH by BASF Wall Systems: An open weave, three-dimensional self-furring, nominal 1/8" thick glass fiber reinforcing lath is for use with 9.5-12.7mm (3/8"-1/2") thickness only.]

[2. PERMALATH 1000 by BASF Wall Systems: An open weave, three-dimensional self-furring, nominal 1/4" thick glass fiber reinforcing lath is for use with a minimum thickness of 12.7mm (1/2”). Complies with ASTM C1764, C1787 and C1788.]

[3. Woven or Welded Wire Lath: A minimum No. 20 gauge, 25.4 mm (1") galvanized woven wire fabric is for use with 9.5-12.7mm (3/8"-1/2") thickness only. Laths shall comply with ASTM C933 (welded) and ASTM C1032 (woven). The lath is self-furred or furred when applied over all substrates.]

[4. Expanded Metal Lath: The lath shall comply with ASTM C847. Furring and self-furring requirements shall be as set forth for wire lath. Minimum weight is 1.36 kg/m² (2.5 lb/yc²). Refer to ASTM C 1063 for additional information]

D. Fastening System for NEOPOR Rigid Insulation Board and Lath:

[1. Masonry: Minimum 4.7mm (3/16") diameter corrosion resistant masonry Windlock type MT fastener with Windlock ULP 302 washer, Lath Plates or equal with 19 mm (3/4") minimum penetration into masonry.]

[2. Steel framing (minimum 33 mil/20 ga): Minimum # 8 or greater corrosion resistant screw with Windlock ULP 302 washer, Lath Plate or equal with 16 mm (5/8") minimum penetration into framing.]

[3. Wood framing: Minimum 3mm (.120") shank corrosion resistant nail 6.9mm (.271") head with Windlock ULP 302 washer, Lath Plate or equal with minimum 31.8mm (1 ¼") penetration into framing or minimum # 8 corrosion resistant wood screw with Windlock ULP 302 washer, Lath Plate or equal with minimum 25mm (1") penetration into framing.]

E. Plaster Sand for use with BASF STUCCOBASE:

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

   Retained on ± 2 Percent
   U.S. Standard Sieve       Min.   Max.
   No. 4                    -     0
   No. 8                    0     10
   No. 16                   10    40
   No. 30                   30    65
   No. 50                   70    90
   No. 100                  95   100

[F. Portland Cement:

1. Conform to ASTM C150, Type I, II or II/II; Fresh and free of lumps.]

G. Water:

1. Clean and potable without foreign matter.

[H. Decorative Shapes:

1. Expanded polystyrene; ASTM C578, Type I; Flame spread less than 25, smoke developed less than 450 per ASTM E84, UL 723; minimum density 15.22 kg/m³ (0.95 lb/ft³; K=6.09/mm (0.24/inch); 19 mm (3/4") thickness minimum as indicated on drawings; meeting the following:

   a. Air-dried (aged) six weeks, or equivalent, prior to installation.

   b. Edges: Square within 0.8 mm per 0.3 meter (1/32" per foot).

   c. Thickness: Tolerance of (+/-) 1.6 mm (1/16”).

   d. Length and width: Tolerance of (+/-) 1.6 mm (1/16”).]

2. NEOPOR Rigid Insulation Board: Flame spread and smoke development 25 and 450 or less respectively per ASTM E84, minimum 40 psi flexural, minimum 20 psi compressive, minimum thermal resistance 4.6/inch at 24°C (75°F) 4.9/ inch at 4°C (40°F).]

I. Stucco Base Coat:

NOTE TO SPECIFIER. Select one of the following BASF STUCCOBASE products. Delete that which is not utilized.

[1. BASF STUCCOBASE: Factory-blended stucco mixture of Portland cement, reinforcing fibers, and proprietary ingredients; supplied by BASF Wall Systems.]
2. BASF STUCCOBASE PREMIX: Factory-blended stucco mixture of Portland cement, reinforcing fibers, sand, and proprietary ingredients; supplied by BASF Wall Systems.

J. Senergy Adhesive/Base Coat:
1. [STANDARD] [ALPHA] Base Coat: 100% acrylic base coat and adhesive, field-mixed with Portland cement; manufactured by BASF Wall Systems.
2. ALPHA DRY Base Coat: Dry-mix base coat and adhesive containing Portland cement; manufactured by BASF Wall Systems.
3. XTRA-STOP Base Coat: 100% acrylic-based, water-resistant base coat, field-mixed with Portland cement; manufactured by BASF Wall Systems.
4. ALPHA GENIE Base Coat: Fiber-reinforced, 100% acrylic base coat, adhesive and leveler, field-mixed with Portland cement; manufactured by BASF Wall Systems.

K. Senergy Reinforcing Mesh: Balanced, open weave glass fiber reinforcing mesh; twisted multi-end strands treated for compatibility with Senergy System components.
1. FLEXGUARD 4: standard weight, 4 oz.

L. BASF STUCCOPRIME: 100% acrylic-based primer; color [ ] to closely match the selected Senergy Finish Color; manufactured by BASF Wall Systems.

NOTE TO SPECIFIER. BASF STUCCOPRIME is recommended for CLASSIC and BELGIAN LACE and required for AURORA TC-100, AURORA STONE and ALUMINA finishes. Although optional in other applications, Senergy highly recommends the use of BASF STUCCOPRIME prior to application of Senergy Finish over applications of ENERGY PLATINUM CI STUCCO wall system “brown coat”. The application of BASF STUCCOPRIME will enhance color uniformity, performance and ease Senergy Finish application and will minimize the likelihood of read-through.

M. Senergy Finish:
1. SENERFLEX Finish: 100% acrylic polymer based finish; air cured, compatible with base coat; Senergy finish color [ ] as selected; finish texture [CLASSIC] [FINE] [TEXTURE] [SAHARA] [BELGIAN LACE] [ENCAUSTO VERONA] [METALLIC] [AURORA TC-100] [AURORA STONE] [ALUMINA™] as scheduled; as manufactured by BASF Wall Systems.
2. SENERFLEX TERSUS finish: modified acrylic based finish with water repellent properties, compatible with base coat; Senergy finish color [ ] as selected; finish texture [F1.0] [M1.5] as scheduled; as manufactured by BASF Wall Systems.
3. CHROMA Finish: 100% acrylic polymer based finish with integrated high performance colorants for superior fade resistance, compatible with base coat; Senergy finish color [ ] as selected; finish texture [F1.0] [M1.5] [R1.5] as scheduled; as manufactured by BASF Wall Systems.
4. SENERLASTIC PLUS Finish: Siliconized 100% acrylic-based, textured elastomeric finish; air cured, color [ ] as selected; Senergy Finish texture [CLASSIC] [FINE] [TEXTURE] [SAHARA] [BELGIAN LACE] as scheduled; as manufactured by BASF Wall Systems.
5. SENERLASTIC Finish: 100% acrylic polymer based, elastomeric finish; air cured, color [ ] selected; Senergy Finish texture [CLASSIC] [FINE] [TEXTURE] [SAHARA] [BELGIAN LACE] as scheduled; as manufactured by BASF Wall Systems.

2.03 ACCESSORIES

A. Trim:

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

1. C-I Weep Track by ClarkDietrich or AMICO: For returning insulated stucco into doors, windows, etc
2. Foundation weep screed: Beveled edge designed to terminate finish system and drain internal moisture.
3. Casing bead: Square edge style.
6. Expansion joints: [Two piece type slip-joint design] or [pair of casing beads spaced for application of sealant bead].

PART 3 - EXECUTION

3.01 EXAMINATION

A. Verify project site conditions under provisions of Section [01 89 00].
B. Walls:
1. Substrates:
a. Acceptable substrates are PermaBase® Cement Board and other cement-boards conforming with ASTM C1325 (Type A-exterior), poured concrete/unit masonry, ASTM C1177 type sheathings including DensGlass™ exterior sheathing, eXP™ sheathing, GlasRoc® sheathing, Securock™ glass-mat sheathing, Weather Defense™ Platinum sheathing, and GreenGlass® sheathing, gypsum sheathing (ASTM C79/C1396), Exposure I or exterior plywood (Grade C/D or better), or Exposure I OSB.
b. Sheathings must be securely fastened per applicable building code requirements and manufacturers recommendations.

c. When applying [SENERSHIELD-R] [SENERSHIELD-VB] to concrete/unit masonry, verify concrete/unit masonry is free of dust, dirt, grease, oils, laitance, efflorescence, biological residue, existing paint or coatings, curing compounds, form release agents, or any other contaminants which might affect the bond. Masonry walls should be properly cured to full load bearing capacity, laid true, and with joints tooled. Properly prepared concrete will have an open texture similar to fine grit sandpaper.
d. Examine surfaces to receive system and verify that substrate and adjacent materials are dry, clean, and sound. Verify substrate surface is flat, free of fins or planar irregularities greater than 6 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 Secondary Moisture Protection Barrier Guidelines for Senergy Stucco Wall System technical bulletin or Air/Water-Resistive/Vapor Barrier Application Guidelines technical bulletin for further guidance.
   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. Roof:
   Verify that all roof flashings have been installed in accordance with the guidelines set by the Asphalt Roofing Manufacturers Association (ARMA).

4. Kick-out Flashing:
   Kick-out flashing must be installed where required. The kick-out flashing must be leak-proof and angled (min 100˚) to allow for proper drainage and water diversion. Refer to SENERGY PLATINUM CI STUCCO wall system typical details.

C. Do not proceed until all unsatisfactory conditions have been corrected.

3.02 PREPARATION
A. Protect all surrounding areas and surfaces from damage and staining during application of SENERGY PLATINUM CI STUCCO wall system.
B. Protect finished work at end of each day to prevent water penetration.

3.03 MIXING
General: No additives are permitted unless specified in product mixing instructions. Close containers when not in use. Prepare in a container that is clean and free of foreign substances. Do not use a container which has contained or been cleaned with a petroleum-based product. Clean tools and equipment with water immediately after use. Dried material can only be removed mechanically.

NOTE TO SPECIFIER: Keep only the products in this section which will be incorporated in the SENERGY PLATINUM CI STUCCO wall system. Delete those not to be utilized.
A. Air/Water-Resistive Barrier
   1. [SENERSHIELD-R] [SENERSHIELD-VB] air/water resistive barrier:
      Mix [SENERSHIELD-R] [SENERSHIELD-VB] with a clean, rust-free paddle and drill until thoroughly blended. Do not add water.]
B. Stucco Base Coat:

[1. BASF STUCCOBASE:
  a. Use mixer which is clean and free of foreign substances.
  b. Add 18.9–22.7 liters (5–6 gallons) of clean potable water to mixer per one bag of BASF STUCCOBASE.
  c. Add one bag of BASF STUCCOBASE.
  d. Add one half 45.4–54.4 kg (100–120 lbs) of the required plaster sand (ASTM C144 or ASTM C897).
  e. Mix for 3–4 minutes at normal mixing speed while adding the remainder 45.4–54.4 kg (100–120 lbs) of the plaster sand. Allow material to set for 2–4 minutes, and then remix adding water to achieve desired consistency. Desired consistency varies with type of application (trowel or gun), substrate (paper-backed lath or block) and whether the stucco is applied to a wall or a ceiling. Note: Continuous mixing may cause excessive air entrainment.]

[2. BASF STUCCOBASE PREMIX:
  a. Use mixer which is clean and free of foreign substances.
  b. Add 7.6–9.5 liters (2–2.5 gallons) of clean potable water to mixer.
  c. Slowly add one bag of BASF STUCCOBASE PREMIX.
  d. Mix for one minute at normal mixing speed. Allow material to set for 2–4 minutes with mixing blades at rest. Then re-mix, adding water to achieve desired consistency. Desired consistency varies with type of application (trowel or gun), substrate (paper-backed lath or block) and whether the stucco is applied to a wall or a ceiling. Note: Continuous mixing may cause excessive air entrainment.]

[C. Senergy Adhesive/Base Coat:

[1. [STANDARD], [ALPHA], [XTRA-STOP], [ALPHA GENIE] Base Coat:  
  a. Mix Base Coat 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 Base Coat. Add Portland cement in small increments, mixing until thoroughly blended after each additional increment.
  c. Clean, potable water may be added to adjust workability.

[2. 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.]

D. Senergy Finish:

[1. [SENERFLEX] [SILCOAT] [SENERLASTIC] [SENERLASTIC PLUS] [CHROMA] [SENERFLEX TERSUS] [METALLIC] finish and [STUCCOPRIME]:  
  a. Thoroughly mix the factory-prepared material with a clean paddle and drill until thoroughly blended.
  b. A small amount of clean, potable water may be added to adjust workability.
  c. Additives are not permitted.
  d. Close container when not in use.
  e. Clean tools and equipment with water immediately after use. Dried material can only be removed mechanically.

[2. [AURORA TC-100] [AURORA STONE] [ALUMINA] Specialty Finish:  
  a. Gently mix the contents of the pail for 1 minute using a low RPM 13mm (1/2") drill equipped with a mixing paddle such as a Demand Twister or a Windlock B-MEW, B-M1 or B-M9.
  b. Additives are not permitted.
  c. Close container when not in use.
  d. Clean tools and equipment with water immediately after use. Dried material can only be removed mechanically.]

3.04 APPLICATION

General: Apply SENERGY PLATINUM CI STUCCO wall system materials in accordance with SENERGY PLATINUM CI STUCCO wall system specifications.

NOTE TO SPECIFIER: Keep only the products in this section which will be incorporated in the SENERGY PLATINUM CI STUCCO wall system. Delete those not to be utilized.

A. Water-Resistive Barrier:

1. Install according to the specific water resistive barrier manufacturer’s specifications and all applicable building code requirements.

2. The water resistive barrier shall be free of any damage such as holes or breaks, and must be applied to all surfaces to receive the SENERGY PLATINUM CI STUCCO Wall System.

3. Wrap the water resistive barrier into rough openings (doors, windows, etc.) in accordance with Senergy’s
Secondary Moisture Protection Barrier Guidelines for Senergy Stucco Wall System technical bulletin and manufacturer’s instructions.

4. Coordinate work with other trades to assure proper sequencing, detailing and installation of materials.

5. Open framing:
   a. Type recommended by manufacturer and placed over open wood or steel framing spaced a maximum of 610 mm (24") on center. Wall bracing, in accordance with the applicable code, shall be installed. Square wall corners and parapet corners, metal corner reinforcements are optional.


B. NEOPOR Rigid Insulation Board:
   1. Begin at base of wall with firm temporary support
   2. Apply horizontally in running bond pattern.
   3. Precut insulation board to fit openings and projections and install as a single piece around corners of openings. Stagger vertical joints and corners. Stagger insulation board and sheathing joints.
   4. Abut all joints and ensure an overall flush surface.
   5. With appropriate fastening system, temporarily secure insulation board with minimum two fasteners per board.
   6. Rasp flush any irregularities that would interfere with proper application of lath.

C. Trim:
   1. Refer to Senergy Stucco Wall Systems Lath and Trim Accessories technical bulletin

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

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

Note: Supplemental fasteners, in the framing or sheathing, can be used to secure lath prior to application of BASF STUCCOBASE.

E. Stucco Base Coat:
   [1. BASF [STUCCOBASE] [STUCCOBASE PREMIX] Base Coat: SENERGY PLATINUM CI STUCCO wall system application 9.5-12.7mm (3/8"–1/2" thickness).
      a. Following surface preparation and installation of the lath and accessories apply the BASF [STUCCOBASE] [STUCCOBASE PREMIX] mixture to the approved substrate by hand troweling or machine spraying to a thickness of 9.5-12.7 mm (3/8" to 1/2”), completely embedding the lath.
      b. Use rod and darby to level the applied base coat without exposing the lath.
      c. After initial set begins and surface has sufficiently hardened, use sponge or hard rubber float as required to fill voids, holes or imperfections, leaving the surface ready to receive Senergy finish.
      d. At subcontractor’s option, the double back method of application, whereby the first and second coats are applied and cured as one system, may be used. If this system is used, the second coat (brown) should be applied as soon as the first coat is rigid.
      e. Damp cure for at least 48 hours by lightly and evenly fogging the surface with water at least twice a day. Direct sunlight, hot temperatures, low humidity and windy conditions may make additional fogging necessary.
f. Allow BASF [STUCCOBASE] [STUCCOBASE PREMIX] to cure a minimum of 6 days prior to application of EPS or NEOPOR Rigid Insulation Board shapes, Senergy base coat or BASF STUCCOPRIME and Senergy Finish application.

[2. BASF [STUCCOBASE] [STUCCOBASE PREMIX] Base Coat: SENERGY PLATINUM CI STUCCO wall system application 19-22mm (3/4"–7/8" thickness).
   a. Nominal plaster base coat thickness:
      1. First coat "scratch": 9.5mm (3/8")
      2. Second coat "brown": 9.5mm (3/8")
   b. Apply BASF [STUCCOBASE] [STUCCOBASE PREMIX] mixture to the approved substrate by hand troweling or machine spraying with sufficient force to develop full adhesion between BASF [STUCCOBASE] [STUCCOBASE PREMIX] mixture and the substrate.
   c. Apply first coat to completely embed lath. Cross rake to provide key for second brown coat. Coat must be uniform in thickness. Ensure the first coat is properly "scratched" and sufficiently rigid to resist cracking prior to application and leveling of the second or "brown" coat.
   d. Dampen scratch coat, apply brown coat to provide the required total thickness. Trowel BASF [STUCCOBASE] [STUCCOBASE PREMIX] into trim to seat trim. The lath shall be fully embedded in the coating and shall be completely covered. Coat must be uniform in thickness. Rod off to desired thickness, leveled with screeds, to provide a true, flat plane. Follow this by wood floating or darbying the surface.
   e. After surface has sufficiently hardened, use sponge or hard rubber float as required to fill voids, holes or imperfections, leaving the surface ready to receive Senergy Finish.
   f. Damp cure for at least 48 hours by lightly and evenly fogging the surface with water at least twice a day. Direct sunlight, hot temperatures, low humidity and wind may make additional fogging necessary.
   g. Allow BASF [STUCCOBASE] [STUCCOBASE PREMIX] to cure a minimum of 6 days prior to application of EPS or NEOPOR Rigid Insulation Board shapes, Senergy base coat or BASF STUCCOPRIME and Senergy Finish application.]

[F. Senergy Adhesive/Base Coat:
   NOTE TO SPECIFIER: If specifying the use of reinforcing mesh, move on to the next step and delete F from this section of the specification.
   1. Apply a skim coat of Senergy base coat, approximately 1.6mm [1/16"] thick to properly cured “brown coat” of [STUCCOBASE] [STUCCOBASE PREMIX].
   2. Allow to dry hard (normally 8 to 10 hours).]

[G. Reinforcing Mesh: Base coat shall be applied so as to achieve reinforcing mesh embedment with no reinforcing mesh color visible.
   1. Install FLEXGUARD 4 over properly cured SENERGY PLATINUM CI STUCCO System “brown coat” of [STUCCOBASE] [STUCCOBASE PREMIX].
   2. Apply mixed Senergy base coat to entire surface of “brown coat” with a stainless steel trowel to embed the reinforcing mesh.
   3. Immediately place FLEXGUARD 4 reinforcing mesh against wet base coat and embed the reinforcing mesh into the base coat by troweling from the center to the edges.
   4. Lap reinforcing mesh 64 mm (2 1⁄2") minimum at edges.
   5. Ensure reinforcing mesh is continuous at corners, void of wrinkles and embedded in base coat so that no reinforcing mesh color is visible.
   6. If required, apply a second layer of base coat to achieve total nominal base coat/reinforcing mesh thickness of 1.6 mm (1/16").
   7. Allow base coat with embedded reinforcing mesh to dry hard (normally 8 to 10 hours).]

[H. Decorative Shapes:
   1. NEOPOR Rigid Insulation Board or Expanded Polystyrene (EPS):
      a. Apply mixed [ALPHA] [ALPHA DRY] base coat to entire surface of insulation board using a stainless steel trowel with 13mm x 13mm (1/2"x 1/2") notches spaced 13mm (1/2") apart or 10mm x 10mm (3/8" x 3/8") notches spaced 10 mm (3/8") apart.
      b. Immediately set shape into place and apply pressure over entire surface of board to ensure positive uniform contact and high initial grab. Do not allow base coat to dry prior to installing.
      c. Abut all joints tightly and ensure overall flush level surface.
      d. Check adhesion periodically by removing a shape prior to set. Properly installed shapes will be difficult to remove and Senergy adhesive/base coat will be adhered to both the BASF STUCCOBASE and the shape.
      e. Fill 1.6mm (1/16") and larger gaps between shapes with slivers of insulation board.
f. Allow application of shapes to dry (normally 8 to 10 hours) prior to application of base coat/reinforcing mesh.
g. Rasp flush any irregularities of the shapes greater than 1.6 mm (1/16”). Senergy base coat/reinforcing mesh: base coat shall be applied so as to achieve reinforcing mesh embedment with no reinforcing mesh color visible.

2. FLEXGUARD 4 Reinforcing Mesh:
a. Apply mixed [ALPHA] [ALPHA DRY] base coat to entire surface of insulation board with a stainless steel trowel to embed the reinforcing mesh.
b. Immediately place FLEXGUARD 4 reinforcing mesh against wet base coat and embed the reinforcing mesh into the base coat by troweling from the center to the edges.
c. Lap reinforcing mesh 64 mm (2 1⁄2”) minimum at edges and 75 mm (3”) minimum onto BASF STUCCOBASE.
d. Ensure reinforcing mesh is continuous at corners, void of wrinkles and embedded in base coat so that no reinforcing mesh color is visible.
e. If required, apply a second layer of base coat to achieve total nominal base coat/reinforcing mesh thickness of 1.6 mm (1/16”).
f. Allow base coat with embedded reinforcing mesh to dry hard (normally 8 to 10 hours).]

[I. BASF STUCCOPRIME:
1. Base coat shall be clean, dry, sound and free of paint, contaminants 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. Apply BASF STUCCOPRIME to substrate with a sprayer, 10 mm (3/8”) nap roller, or good quality latex paint brush at a rate of approximately 3.6–6.1 m² per liter (150–250 ft² per gallon).
3. BASF STUCCOPRIME shall be dry to the touch before proceeding to the Senergy Finish application.]

J. Senergy Finish:
[1. [SENERFLEX] [SENERFLEX TERSUS] [CHROMA] [SENERLASTIC] [SENERLASTIC PLUS] Finish:
a. Apply Senergy finish directly to the Base Coat with a clean, stainless steel trowel.
b. Apply and level Senergy finish during the same operation to minimum obtainable thickness consistent with uniform coverage.
c. Maintain a wet edge on Senergy finish by applying and texturing continually over the wall surface.
d. Work Senergy finish to corners, joints or other natural breaks and do not allow material to set up within an uninterrupted wall area.
e. Float Senergy finish to achieve final texture.

2. AURORA TC-100 Finish:
a. Apply BASF STUCCOPRIME to substrate in accordance with current BASF STUCCOPRIME product bulletin.
b. BASF STUCCOPRIME shall be of corresponding color for selected AURORA TC-100 finish color. Allow BASF STUCCOPRIME to dry to the touch before proceeding to AURORA TC-100 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 STUCCOPRIME to substrate in accordance with current Senergy STUCCOPRIME product bulletin.
b. STUCCOPRIME shall be of corresponding color for selected AURORA STONE finish color. Allow STUCCOPRIME 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:
   a. Apply STUCCOPRIME to substrate in accordance with current Senergy STUCCOPRIME product bulletin. STUCCOPRIME shall be of corresponding color for selected ALUMINA finish color. Allow STUCCOPRIME 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").]

[K. 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 BASF STUCCOBASE from rain, snow and frost for 48–72 hours following application.
   B. Protect Senergy base coat, [SENERSHIELD-R] [SENERSHIELD-VB], primer and finish from rain and temperatures below 4°C (40°F) for 24 hours or until dry.
   C. Protect installed construction under provisions of Section [01 76 00] [ ].

END OF SECTION WARRANTY

BASF warrants this product to be free from manufacturing defects and to meet the technical properties on the current Product Bulletin, if used as directed within shelf life. Satisfactory results depend not only on quality products but also upon many factors beyond our control. BASF MAKES NO OTHER WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO ITS PRODUCTS. The sole and exclusive remedy of Purchaser for any claim concerning this product, including but not limited to, claims alleging breach of warranty, negligence, strict liability or otherwise, is shipment to purchaser of product equal to the amount of product that fails to meet this warranty or refund of the original purchase price of product that fails to meet this warranty, at the sole option of BASF. In the absence of an extended warranty issued by BASF, any claims concerning this product must be received in writing within one (1) year from the date of shipment and any claims not presented within that period are waived by Purchaser. BASF WILL NOT BE RESPONSIBLE FOR ANY SPECIAL, INCIDENTAL, CONSEQUENTIAL (INCLUDING LOST PROFITS) OR PUNITIVE DAMAGES OF ANY KIND.

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