Senergy® Surfacing Systems for the ProTEC Concrete Structural Insulated Panel System (SIPS)

Weather resistant surfacing system using a mesh-reinforced base coat and 100% acrylic polymer exterior finish.

**DESCRIPTION**
Senergy Surfacing Systems for the ProTEC Concrete SIPS provide the desirable “Stucco Look” and aesthetic appeal. The Senergy Surfacing Systems are comprised of a reinforced base coat, optional primer and a 100% acrylic polymer finish.

Finishes are available in a limitless color selection and offer performance enhancement options, including increased resistance to dirt pick-up and mildew.

**Uses**
For exterior walls in residential, commercial and institutional construction when a weather resistant, low maintenance “Stucco Look” wall finish is desired.

**Senergy Surfacing Systems**

<table>
<thead>
<tr>
<th>Features</th>
<th>Benefits</th>
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<tbody>
<tr>
<td>Unlimited colors, textures and architectural</td>
<td>Support design flexibility</td>
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<tr>
<td>details</td>
<td></td>
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<tr>
<td>100% Acrylic, reinforced base coats</td>
<td>Produce a weather-resistant barrier, provide crack</td>
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<tr>
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<td>resistance</td>
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<tr>
<td>100% Acrylic finish coats</td>
<td>Resist fading and abrasion, offer options for added</td>
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**Senerg y® Surfacing Systems for the ProTEC® Concrete Structural Insulated Panel System**

**ProTEC Concrete SIPS (www.tclear.com)**

<table>
<thead>
<tr>
<th>Features</th>
<th>Benefits</th>
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<tbody>
<tr>
<td>Extruded polystyrene insulation core</td>
<td>Long-term high insulation value (R-20)</td>
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<tr>
<td>Util-A-Crete cementitious backer board skin</td>
<td>Moisture and impact resistant. Will not warp, decay, soften or swell</td>
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<tr>
<td>Quick and easy assembly</td>
<td>Reduced labor time and cost. Faster construction cycles</td>
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<td>Reduced air infiltration</td>
<td>Lower heating/cooling costs. Greater overall comfort</td>
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**LIMITATIONS**

Do not apply the Surfacing Systems directly to dimensional framing lumber/ blocking which might occur at window and door bucks, etc.
Do not apply the Surfacing Systems below grade.
Cracks may occur at Util-A-Crete cement board joints and appear in the finished exterior surface.
Surfacing Systems shall not serve as the foundation damp-proofing.

**DIRECTIONS**

**General:** Repair any damaged ProTEC areas prior to the application of the Senergy Surfacing Systems.
Comply with current Senerflex Wall System specifications and details except as noted herein.
Consult ProTEC for uses, detail, design and application considerations as well as limitations of ProTEC Concrete SIPS.

**Application of the Surfacing Systems:**
Pre-treating Util-A-Crete Cement Board Joints, Corners, etc
A. Center SELF-ADHERING MESH TAPE (4") over all cement board joints and terminations and firmly press while unrolling. For openings, apply SELF-ADHERING MESH TAPE (4") over channel and onto cement board.
B. Ensure SELF-ADHERING MESH TAPE (4") is continuous, void of wrinkles. Overlap SELF-ADHERING MESH TAPE (4") a minimum 65 mm (2 1/2").
C. Apply mixed Base Coat to entire surface of SELF-ADHERING MESH TAPE (4").
D. Allow Base Coat/SELF-ADHERING MESH TAPE (4") to dry prior to application of Senergy Reinforcing Mesh and Base Coat.

Application of Senergy Reinforcing Mesh and Base Coat
A. Apply mixed ALPHA ALPHA DRY ALPHA GENIE STANDARD XTRA-STOP Base Coat to entire surface of cement-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.
D. Ensure Reinforcing Mesh is continuous at corners, void of wrinkles and fully embedded in Base Coat.
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) prior to application of Senergy Finish.

Application of Senergy Finish
A. Apply Finish directly to Base Coat/Reinforcing Mesh with a clean stainless steel trowel to thickness required for type of Finish specified.
B. Apply and level Finish during 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 natural breaks and do not allow material to set up within an uninterrupted wall area.
E. Float Finish to achieve final texture.

**COMPONENTS**
Senergy Surfacing Systems are comprised of Senergy Base Coat, Senergy Reinforcing Mesh and a textured Finish from Senergy. Optional TINTED PRIMER can enhance appearance and performance.
Special Shapes:
Used to enhance design aesthetics such as moldings, cornices, quoins, ogees, etc., these can be integrated into the system. The EPS insulation shapes must conform to Senergy specifications. They must be reinforced with Senergy Base Coat and Reinforcing Mesh prior to application of the optional TINTED PRIMER and Finish.

DESIGN CONSIDERATIONS
Maximum allowable deflection is L/240.
Windows and doors may permit some water to pass through the frame material or joints. To reduce the potential for intruding water, the rough opening must be properly protected and a means provided to allow intruding water to escape.
Avoid details that trap water.
Follow the window and door manufacturers’ recommendations for proper installation.

TECHNICAL INFORMATION
Consult the BASF Wall Systems Technical Services Department for specific recommendations concerning all other applications.
Consult the Senergy website, www.senergy.cc, for additional information about products and systems and for updated literature.

Product Data - Sizes and Packaging
Expanded Polystyrene Insulation Board: 0.6 m x 1.22 m (2' x 4’), minimum density of 14.41 k/m³ (0.9 lb/ft³) and thickness minimum 25 mm (1”) meeting Senergy specifications.
SELF-ADHERING MESH TAPE, standard weight reinforcing mesh coated with a pressure sensitive adhesive and used with Base Coat as reinforcement over sheathing joints, rough openings and at terminations.
FLEXGUARD 4, standard reinforcing mesh at approximately 4.5 oz/yd² is available in 96.5 cm x 45.7 m (38” x 150’) rolls. For wall system areas not expected to receive abnormal traffic or abuse.
INTERMEDIATE 6, standard weight reinforcing mesh at approximately 5.6 oz/yd² is available in 965 mm x 45.7 m (38” x 150’) rolls. For wall system areas not expected to receive abnormal traffic or abuse.
INTERMEDIATE 12, intermediate weight reinforcing mesh at approximately 11 oz/yd² is available in 965 mm x 22.8 m (38” x 75’) rolls. Used either alone or with FLEXGUARD 4 or INTERMEDIATE 6 to provide added impact resistance at specific areas such as around doors and walkways.
STRONG 15, medium-heavy weight reinforcing mesh at approximately 15 oz/yd² is available in 965 mm x 22.8 m (38” x 75’) rolls. Used for areas expected to receive traffic and abuse.
HI-IMPACT 20, heavyweight reinforcing mesh at approximately 20 oz/yd² is available in 990 mm x 22.8 m (39” x 75’) rolls. Used for areas expected to receive a high degree of traffic and abuse.
CORNER MESH, intermediate-weight mesh at approximately 9.1 oz/yd² for use at exterior corners, is available in 241 mm x 45.7 m (9” x 150’) rolls.

Approximate coverage rate for ALPHA GENIE Base Coat, ALPHA Base Coat, STANDARD Base Coat, and XTRA-STOP Base Coat to embed FLEXGUARD 4 is 26 m² (280 ft²) per 27.2-kg, 19-liter (60-pound, 5-gallon) pail.
Approximate coverage rate for ALPHA DRY Base Coat to embed FLEXGUARD 4 is 11.1 m² (120 ft²) per 22.6-kg (50-pound) bag.
Approximate coverage rate for Senergy TINTED PRIMER is 69.6–116.1 m² (750–1,250 ft²) per 24.9-kg, 19-liter (55-pounds, 5-gallon) pail.

SENERFLEX and SILCOAT Finishes are packaged in 31.7-kg, 19-liter (70 pound 5-gallon) pails.
Approximate coverages per pail for various textures are: CLASSIC [13 m² (140 ft²)], BELGIAN LACE [14.8 m² (160 ft²)], FINE [14.8 m² (160 ft²)], SAHARA [11.1 m² (120 ft²)], COARSE [8.3 m² (90 ft²)], TEXTURE (coverage varies depending upon application).

STORAGE
Store material in a cool, dry place. Avoid direct sunlight. Maintain temperature above 4°C (40°F) (10°C/50°F for Aurora TC-100, Aurora Stone and Borealis Finishes).

HEALTH AND SAFETY
Follow good safety and industrial hygiene practices during handling and installing products and systems. Take necessary precautions and wear the appropriate personal protective equipment as needed. Read material safety data sheets and related literature on products before specification and/or installation.
Residential Policy
On one and two-family residential framed construction, BASF Wall Systems requires that the wall system selected be one that includes provisions for moisture drainage. The choices include Senturion® line of water managed EIFS, commercial Senerflex® Wall Systems integrating moisture management features, Senergy Stucco Wall System, and Senergy Cement-Board Stucco™ Systems. Senergy Exterior Surfacing Systems for insulating concrete forms are also acceptable. There are no exceptions to this policy. Under no circumstances will BASF Wall Systems warrant the use of any other system on this type of construction without expressed written authorization from BASF Wall Systems. [Residential construction using EIFS on masonry (CMU) or poured concrete does not require the additional water management provisions described above.]

See the Senergy Residential Policy Bulletin for a more detailed discussion of this topic. Consult BASF Wall Systems Technical Services Department for specific recommendations concerning all other applications. Consult the Senergy web-site, www.senergy.cc for additional information about products and systems and for updated literature.

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