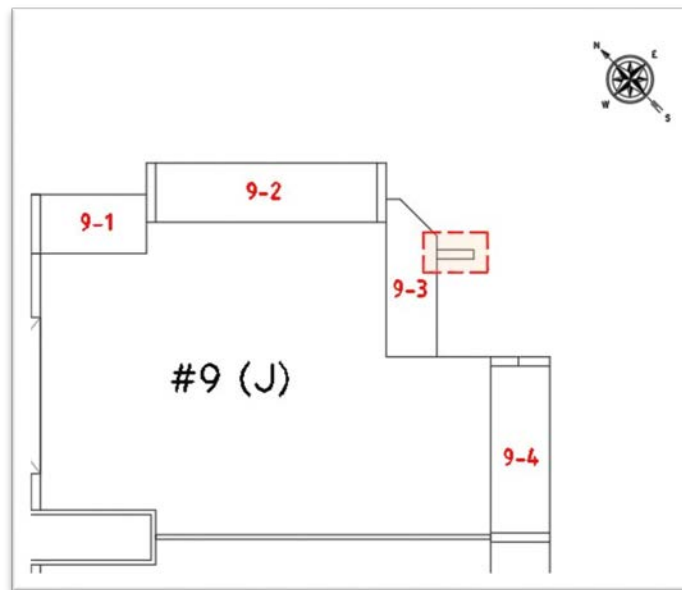




Prepared for: Tribune Holdings, LLC  
Prepared by: MUHLE Consulting  
Date: 7 January 2020  
Job number: 18-LTL-002  
Property: South Hampton, Kingston Plantation  
Subject: NE EIFS Wall Replacement Method

The following is a replacement method to address existing water infiltration to the Exterior Insulation Finish System (EIFS) wall at the northeast side of Stack “J” for all floors (see Figure #1 for location).

Drawing #18-LTL-002-12-R1 details the structural replacement required. Appendix “A” details the replacement EIFS detail required.



**FIGURE #1: EIFS Replacement Location**

A change order for the EIFS wall replacement is included for reference (see Appendix “B”).

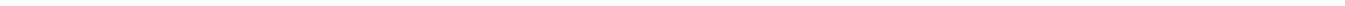
If you have any questions or need any additional information, please do not hesitate to contact our firm at either of the contact methods listed below.

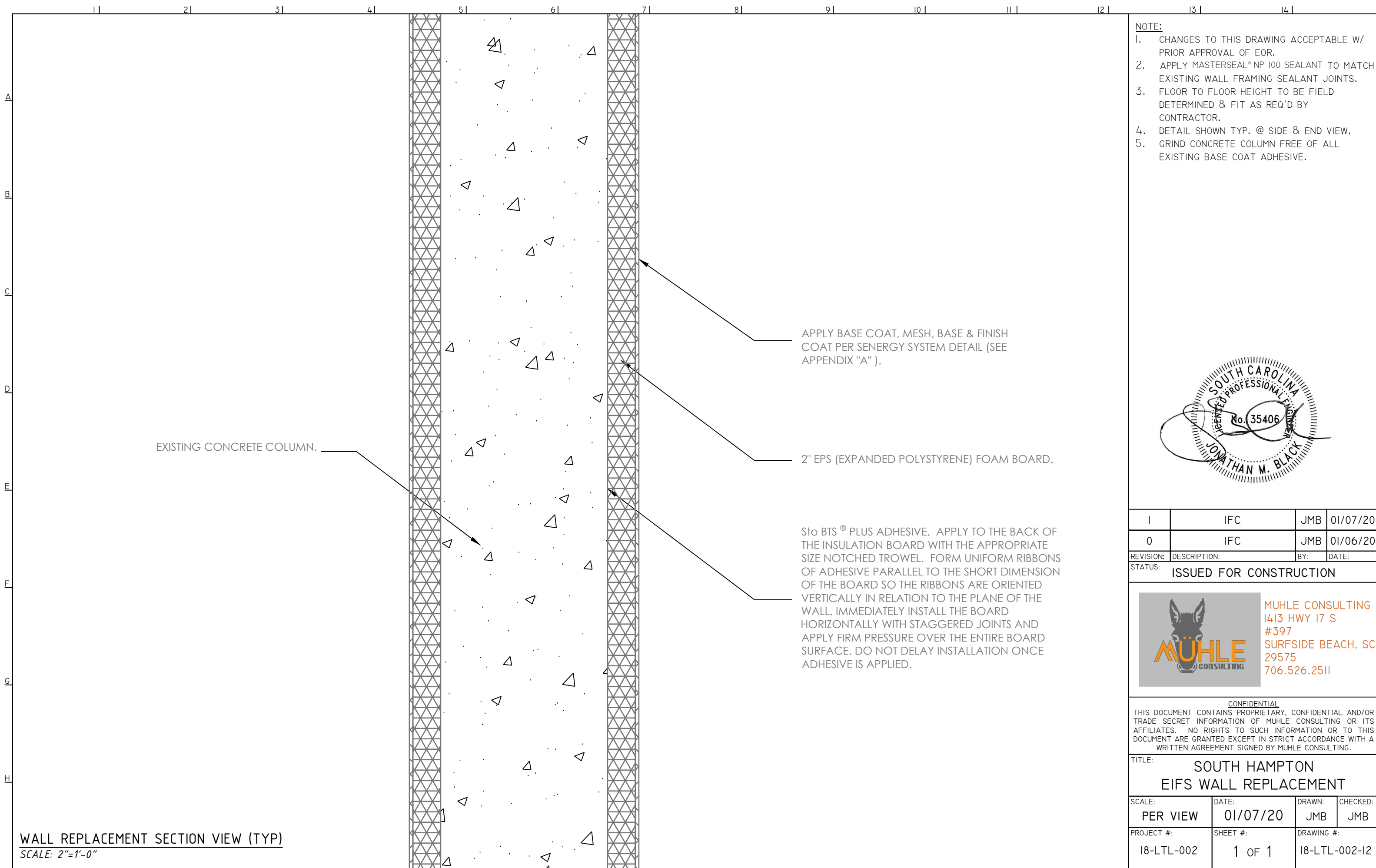
Respectfully,

Jonathan M. Black, PE

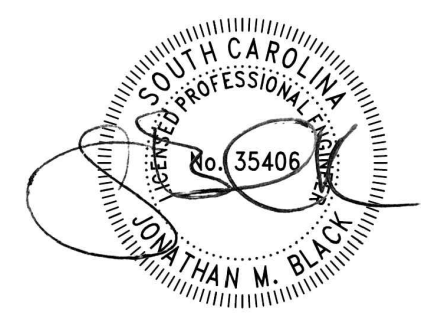


## APPENDIX "A"





- NOTE:**
1. CHANGES TO THIS DRAWING ACCEPTABLE W/ PRIOR APPROVAL OF EOR.
  2. APPLY MASTERSEAL® NP 100 SEALANT TO MATCH EXISTING WALL FRAMING SEALANT JOINTS.
  3. FLOOR TO FLOOR HEIGHT TO BE FIELD DETERMINED & FIT AS REQ'D BY CONTRACTOR.
  4. DETAIL SHOWN TYP. @ SIDE & END VIEW.
  5. GRIND CONCRETE COLUMN FREE OF ALL EXISTING BASE COAT ADHESIVE.



1	IFC	JMB	01/07/20
0	IFC	JMB	01/06/20

REVISION: DESCRIPTION: BY: DATE:  
 STATUS: ISSUED FOR CONSTRUCTION



**MUHLE CONSULTING**  
 1413 HWY 17 S  
 #397  
 SURFSIDE BEACH, SC  
 29575  
 706.526.2511

**CONFIDENTIAL**  
 THIS DOCUMENT CONTAINS PROPRIETARY, CONFIDENTIAL AND/OR TRADE SECRET INFORMATION OF MUHLE CONSULTING OR ITS AFFILIATES. NO RIGHTS TO SUCH INFORMATION OR TO THIS DOCUMENT ARE GRANTED EXCEPT IN STRICT ACCORDANCE WITH A WRITTEN AGREEMENT SIGNED BY MUHLE CONSULTING.

TITLE: **SOUTH HAMPTON EIFS WALL REPLACEMENT**

SCALE: <b>PER VIEW</b>	DATE: <b>01/07/20</b>	DRAWN: <b>JMB</b>	CHECKED: <b>JMB</b>
PROJECT #: <b>18-LTL-002</b>	SHEET #: <b>1 OF 1</b>	DRAWING #: <b>18-LTL-002-12</b>	

**WALL REPLACEMENT SECTION VIEW (TYP)**  
 SCALE: 2"=1'-0"

# Senerflex<sup>®</sup> Secondary Weather Barrier Design

Class PB EIFS incorporating an air/water-resistive barrier

## System Overview



**BASF**

We create chemistry



## DESCRIPTION

SENERFLEX SECONDARY WEATHER BARRIER DESIGN is an enhanced Class PB EIFS that includes a secondary air/water-resistive barrier for the protection of moisture sensitive sheathings. The system offers design flexibility, aesthetic appeal and energy savings. Integrated system components include air / water-resistive barrier, adhesive, EPS insulation board, reinforced base coat and 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. SENERFLEX SECONDARY WEATHER BARRIER DESIGN complies with ASTM E 2568, and has passed rigorous tests including Full-Scale Fire, Wind-Load, Wind-Driven Rain, and Large and Small Missiles.

The system features easy installation, proven durability and low maintenance.

Apply the system directly to the following acceptable substrates:

PermaBase® Cement Board and other cement boards conforming with ASTM C1325 (Type A - exterior); poured concrete/unit masonry; ASTM C1177 type sheathings, including Weather Defense™ Platinum sheathing, GreenGlass® sheathing, e<sup>2</sup>XP™ sheathing, GlasRoc® sheathing, Securock™ glass-mat sheathing, and DensGlass® exterior sheathing; gypsum sheathing (ASTM C79/C1396); Exposure I or exterior plywood (Grade C/D or better); or Exposure I OSB.

## USES

For exterior walls in new and retrofit commercial and institutional projects when additional moisture protection of the sheathing is desired or required.

## ADVANTAGES

- Incorporates a seamless, monolithic secondary air/water-resistive barrier to protect the sheathing and to guard against incidental moisture intrusion and air infiltration
- Seamless exterior blanket of insulation provides high R values, lowers heating and cooling costs
- Cost-effective
- Potentially allows downsizing of HVAC systems
- Provides the ability to achieve any architectural style with unlimited design options
- Economical architectural detailing
- Does not require control joints; flexible
- Fade-, crack-, abrasion- and dirt-resistant
- Multiple options for impact resistance improve functional design, ease of maintenance
- Wide selection of finish textures, standard and custom colors

## DESIGN CONSIDERATIONS

### Expansion Joints

Required in the following locations:

- Where movement is anticipated (e.g., floor lines, canopies, carports, porte-cocheres, etc.)
- Where EIFS meets dissimilar materials (e.g., windows, doors, transitions to brick or other siding)
- Where substrate materials change

- At floor lines in wood frame construction where movement or cross grain shrinkage is anticipated
- At structural or existing expansion joints
- Expansion joint size and location per design as required for structural movement

### Horizontal Applications

Minimum slope: 1:2 with maximum width of 30.5 cm (12") [e.g. 15 cm in 30.5 cm (6" in 12") width].

### Substrate

- Maximum substrate design deflection is L/240.
- Consult the framing and sheathing manufacturer for design and application considerations.

### Air/Water-Resistive Barrier

- Sheathing must be protected with either SENERSHIELD, SENERSHIELD-R, OR SENERSHIELD-VB installed per applicable building code and manufacturer's requirements.

### General

- EPS board size is limited to 2' x 4'. The minimum thickness of EPS at any point on the wall can not be less than 3/4". Consider this when designing and installing reveals.
- Use Strong 15/Hi-Impact 20 mesh at ground floor and on other locations where high traffic is expected.

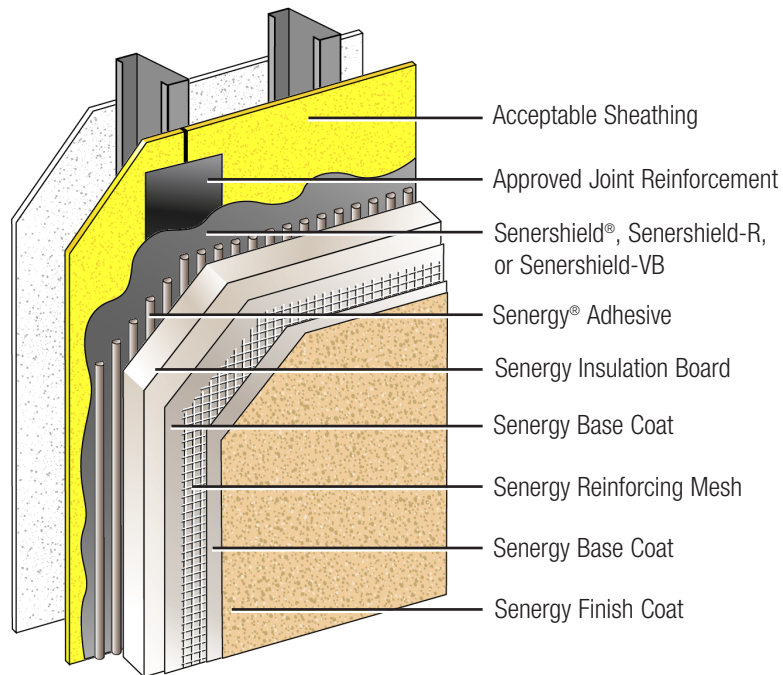
### Sealants, Backer Rod, Flashing

- Acceptable sealant installed with backer rod or bond breaker tape shall be used at all transitions between EIFS and other elements such as windows, doors, vents, penetrations, transitions to dissimilar elements, etc.
- Flashing at windows, doors, chimneys, transitions between EIFS and roof and at other points specified shall be installed in accordance with component manufacturer's instructions.

## BEST PRACTICES FOR INSTALLERS

### General

- All flashing should be installed per codes prior to the installation of SENERFLEX SECONDARY WEATHER BARRIER DESIGN.
- A mock-up of the SENERFLEX SECONDARY WEATHER BARRIER DESIGN showing all components should be prepared using the same tools and skills that will be used in actual construction, and the sample should be kept at the jobsite during construction.
- Do not use below grade; system must terminate a minimum of 8" above grade.
- Pail components must be kept at a minimum of 4°C (40°F) (10°C/50°F for AURORA TC-100, AURORA STONE and ALUMINA finishes) during shipping and storage. A minimum temperature of 4°C (40°F) (10°C/50°F for AURORA TC-100, AURORA STONE and ALUMINA finishes) is required during application of all components and until completely dried.
- Protect dry (bagged) products from moisture. EPS insulation boards should be stored flat, out of direct sunlight.
- No additives are permitted to any components, unless approved by BASF Wall Systems.
- Follow the application instructions for each component.
- All substrates must be clean, dry and sound without planar irregularities greater than 1/4" in 10'.



**Senergy Secondary Weather Barrier Design**

- For SENERSHIELD, SENERSHIELD-R, or SENERSHIELD-VB fluid-applied air/water-resistive barrier, refer to the product bulletin and technical bulletins for application instructions.

#### **Insulation Boards**

- All system terminations and penetrations must be back-wrapped with mesh and base coat.
- EPS board size is limited to 2' x 4'. The thickness of the board must be 3/4" to 4". The minimum thickness of EPS at any point on the wall can not be less than 3/4". Consider this when installing reveals.
- Do not break reinforcing mesh in the reveal; offset 4–6" minimum. Do not align reveals with insulation board joints; offset 4–6" minimum.
- Offset from sheathing joints by a minimum of 16". Offset from corners of doors, windows and other penetrations by a minimum of 4".
- Stagger joints in a running bond pattern offset a minimum of 6".
- Interlock corners.
- Prior to installation of the base coat, entire EPS covered wall must be completely rasped to remove high and low spots and to remove dust from the surface of the EPS.
- Use 3/8" x 3/8" x 3/8" or 1/2" x 1/2" x 1/2" trowel to apply adhesive to back of insulation boards.
- Always fill voids in insulation layer greater than 1/16" with slivers of insulation and not with base coat.

#### **Reinforced Base Coat**

- If mechanical fasteners were used to attach insulation, pre-spot each washer head with base coat.
- Flexguard 4 Reinforcing Mesh/Intermediate 6/Intermediate 12 must overlap a minimum of 2 1/2".
- Strong 15/Hi-Impact 20 mesh must not overlap; butt edges together. After Strong 15/Hi-Impact 20 mesh are embedded in base coat, a second layer of Flexguard 4/Intermediate 6/Intermediate 12 and base coat must cover that layer.
- Install "butterflies" of standard mesh at corners of all windows, doors and other penetrations.

- Install a second layer of reinforcing mesh a minimum of 4" on both sides of inside and outside corners.
- Mesh color should never be visible through the base coat.
- Special shapes must also be reinforced with base coat and reinforcing mesh.
- Protect work from precipitation for a minimum of 24 hours.

#### **Finish**

- Use only stainless steel trowels.
- Avoid working in direct sunlight.
- Finishes should be applied with adequate man power, tools and staging to keep a wet edge.
- A primer tinted to the color of the finish is recommended prior to application of filled finishes.
- Do not run finish into sealant joints.
- Do not quit in the middle of a wall; run to natural breaks.
- Do not use different batches of finish on the same elevation.
- Protect from precipitation for a minimum of 24 hours.
- Do not apply finish over sealants.

#### **LIMITATIONS**

- Use only for above grade vertical walls.
- Do not use in one- or two-family framed residential construction, or Type V, Group R 1,2,3 or 4 framed commercial construction.

#### **SPECIFICATIONS & DETAILS**

The contents of this system overview are intended to provide the design professional information required to evaluate this assembly against specific project requirements. Further useful information to support the creation of a project manual such as a guide specification, product bulletins, and assembly details are available on the Senergy website at [www.senergy.basf.com](http://www.senergy.basf.com).

#### **TECHNICAL SUPPORT**

For answers to questions or specific recommendations about this assembly, please consult our website at [www.senergy.basf.com](http://www.senergy.basf.com) or contact our Technical Services Department: Toll-free 800-589-1336.

## HEALTH & 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.

## WARRANTY

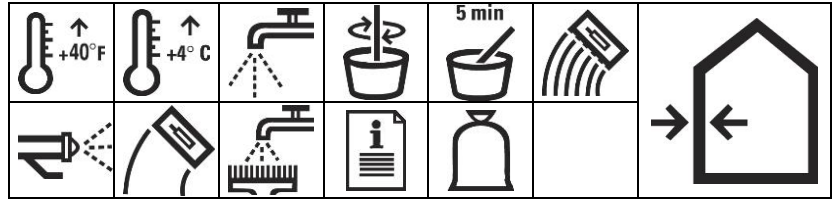
Refer to the Senergy *EIFS and Coating Warranty Schedule* for specific information about this product/system.

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.**

Purchaser must determine the suitability of the products for the intended use and assumes all risks and liabilities in connection therewith. 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, nor shall any legal relationship be created by or arise from the provision of such information and advice. BASF reserves the right to make any changes according to technological progress or further developments. The Purchaser of the Product(s) must test the product(s) for suitability for the intended application and purpose before proceeding with a full application of the product(s). Performance of the product described herein should be verified by testing and carried out by qualified experts.

# Sto BTS® Plus

80727 Sto BTS Plus



## Technical Data

REPORT	TEST METHOD	TEST CRITERIA	TEST RESULTS
<b>Surface Burning</b>	ASTM E-84	< 25 Flame Spread < 450 Smoke Developed	0 5
<b>Adhesion (psi)</b>	ASTM C-297 Modified	28 days	> 30 Gypsum Sheathing* > 15 EPS Board* > 100 Concrete Block > 40 Dens-Glass® Gold** > 100 Concrete
<b>Impact Strength</b>	EIMA 101.86	Standard Impact Classification	Pass

\* Failure of substrate

\*\* Dens-Glass Gold is a registered trademark of the G-P Gypsum Corp.

*Sto BTS Plus is a one-component, polymer-modified, cement based, dry powder material used as an adhesive and base coat in Sto Wall Claddings, including StoTherm ci Classic and StoTherm ci Lotusan Systems. It is specially designed to provide for the recommended minimum 1/16" base coat thickness in a single application.*

### Coverage

"Through the wall": 55-75 ft<sup>2</sup> (5.1-7.0 m<sup>2</sup>) per bag (when used for both adhesive and base coat applications).

As an adhesive over sheathing and smooth masonry: 90-135 ft<sup>2</sup> (8.4-12.5 m<sup>2</sup>) per bag, applied with a 1/2" x 1/2" (13 mm x 13 mm) U-notched trowel having 2" (51 mm) spread between notches.

As an adhesive over rough or uneven masonry: 30-45 ft<sup>2</sup> (2.8-4.2 m<sup>2</sup>) per bag, applied with a 5/8" x 5/8" (16 mm x 16 mm) square-notched trowel having 5/8" (16 mm) spread between notches.

As a base coat: 80-125 ft<sup>2</sup> (7.4-11.6 m<sup>2</sup>) per bag.

As a skim coat: 90-135 ft<sup>2</sup> (8.4-12.5 m<sup>2</sup>) per bag.

*Coverage may vary depending on application technique and surface conditions.*

## Features Benefits

<b>1 One-component</b>	Ready to use; easily mixed with water on the job site
<b>2 Polymer-modified</b>	Excellent adhesion; increases durability and freeze/thaw resistance
<b>3 High polymer/cement ratio</b>	Improved flexural strength; resists cracking
<b>4 Creamy smooth consistency</b>	Trowels easily; increases job site productivity
<b>5 Vapor permeable</b>	Allows substrate to breathe naturally; resists blisters caused by trapped vapor
<b>6 High build</b>	Labor savings; can be applied to 1/16" (1.6 mm) thickness in one application with standard reinforcing mesh
<b>7 Factory blended Portland cement</b>	Assures performance mix ratio
<b>8 Low cement ratio</b>	Less alkalinity, less free lime, less efflorescence
<b>9 Bagged powder product</b>	Less solid waste than pails; freezing protection not required prior to mixing

## Surface Preparation

### As an adhesive

**StoGuard® Air/Moisture Barrier:** ensure surface is clean, dry and free of surface contamination. Install StoTherm ci insulation board with adhesive within 30 days of the application of Sto Gold Coat, or clean the surface and recoat with Sto Gold Coat.

**Concrete or Masonry:** surfaces must be clean, dry and free of frost, damage and all bond-inhibiting materials, including dirt, efflorescence, laitance, form oil and other foreign matter. Loose or damaged material must be removed by water blasting, sandblasting or mechanical wire brushing and repaired. Avoid application over irregular surfaces. Resurface, patch or level surfaces to required tolerance and smoothness with appropriate Sto leveling materials. Refer to ASTM D-4258 and ASTM D-4261 for complete details on preparing cementitious substrates for coatings.

### Packaging

47 lb. bag (21.3 kg).

### Shelf Life

12 months, if protected from moisture and properly stored.

### Storage

Store off the ground in a dry area. Protect from direct sunlight, extreme heat [90°F (32°C)], moisture and freezing.



## Sto BTS® Plus

## Surface Preparation cont.

**Glass Mat Gypsum Sheathing in Compliance with ASTM C 1177:** ensure surface is clean, dry and free of surface contamination. Sheathing must be installed and protected in accordance with manufacturer's and building code requirements. Remove and replace weather-damaged sheathing. Avoid application over irregular, out of plane surfaces. Install StoTherm ci insulation board with adhesive within 30 days of installation of the sheathing.

## Mixing

Use 5-6.5 quarts (4.7-6.2 L) of water per 47 lb. bag (21.3 kg). Mix automatically using Sto's S-25 Continuous Mixer, or mix manually by adding one 47 lb. (21.3 kg) bag of Sto BTS Plus to 5-6.5 quarts (4.7-6.2 L) of clean, potable water in a clean mixing pail. Mix with a clean, rust-free electric drill and paddle.

## Application

Apply only to sound and clean, dry, properly prepared, frost-free surfaces.

**As an adhesive:** Apply to the back of the insulation board with the appropriate size notched trowel. When using Sto's M-8 Spray pump apply directly onto the substrate. Form uniform ribbons of adhesive parallel to the short dimension of the board so the ribbons are oriented vertically in relation to the plane of the wall. Immediately install the board horizontally with staggered joints and apply firm pressure over the entire board surface. Do not delay installation once adhesive is applied.

**As a base coat:** Apply with spray equipment such as Sto's M-8 Spray Pump or apply manually with a stainless steel trowel to an approximate thickness of 1/8" (3 mm). Work horizontally or vertically in strips of 40" (1 m) and immediately embed Sto Mesh in the wet Sto BTS Plus by troweling from the center to the edges of the mesh. Avoid wrinkles in the mesh and smooth the base coat to eliminate trowel marks. Minimum recommended thickness of the reinforced base coat is 1/16" (1.6 mm) when dry. Reapply

## Limitations

- Use Sto BTS Plus only when surface and ambient temperatures are above 40°F (4°C) during application and drying period.
- Sto BTS Plus should not be used on weather-exposed horizontal or below grade surfaces or where immersion in water may occur.
- Sloped surfaces: Refer to Sto details.
- Sto BTS Plus should not be used as a finish coating. It should not be used over wood surfaces except for wood sheathing surfaces protected with StoGuard®.
- Prevent rapid loss of moisture from exposure to direct sun, wind and high temperatures.

## As a base coat

**StoTherm ci Insulation Board:** insulation must be rasped and free of all bond inhibiting materials.

**Concrete or Masonry:** surfaces must be clean, dry and free of frost, damage and all bond-inhibiting materials, including dirt, efflorescence, laitance, form oil and other foreign matter. Loose or damaged material must be removed by water blasting, sandblasting or mechanical wire brushing and repaired.

Allow to set approximately five minutes, adjust mix if necessary by adding up to 12 fl. oz. (0.35 L) of water per bag, remix to a uniform consistency. Avoid retempering after mixing of product. Do not exceed maximum amount of water in mix ratio.

additional base coat if necessary to achieve minimum thickness as soon as the first application is dry.

**As a skim coat:** Apply in one application to a maximum thickness of 1/16" (1.6 mm) to the prepared surface and smooth the surface.

## Curing/Drying

Dries within 24 hours under normal drying conditions [70°F (21°C), 50% RH]. Allow additional drying time during cold, humid, or wet weather until insulation board is fully adhered before rasping, and before application of primer or finish to hardened Sto BTS Plus. Protect from rain and freezing until completely dry.

Sto recommends priming using the appropriate Sto Primer prior to application of finish.

## Clean Up

Clean tools and equipment with water immediately after use. Dried material can only be removed mechanically.

## Health And Safety

## Health Precaution

Contains Portland cement and crystalline silica. Avoid breathing dust. As with any chemical construction product, exercise care when handling.

**DANGER!**

Causes serious eye damage and/or skin irritation. May cause an allergic skin reaction, respiratory irritation, drowsiness or dizziness.

## Safety Precaution

Wash hands thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.

**First Aid: EYE CONTACT:**

Immediately flush eyes with plenty of water for at least 15 to 20 minutes. Ensure adequate flushing of the eyes by separating the eye lids with fingers. Get immediate medical attention. **SKIN CONTACT:** Immediately wash skin with plenty of soap and water for at least 15 to 20 minutes, while removing contaminated clothing and shoes. Get medical attention if irritation develops or persists. **INHALATION:** If inhaled, remove to fresh air. If not breathing give artificial respiration or give oxygen by trained personnel. Seek medical attention immediately. **INGESTION:** If swallowed, do NOT induce vomiting. Call a physician or a poison control center immediately. Never give anything by mouth to an unconscious person.

**Spills**

Collect in an appropriate container. Uncured material may be removed with water.

**Disposal**

Dispose of in accordance with local, state or federal regulations.

**Warning**

KEEP CONTAINER CLOSED WHEN NOT IN USE. KEEP OUT OF THE REACH OF CHILDREN. NOT FOR INTERNAL CONSUMPTION. FOR INDUSTRIAL USE ONLY. Consult the Safety Data Sheet for further health and safety information.

Safety Data Sheet (SDS) is available at [www.stocorp.com](http://www.stocorp.com)

**LIMITED WARRANTY**

This product is subject to a written limited warranty which can be obtained free of charge from Sto Corp.

Refer to Sto Specifications for more complete information on proper use and handling of this product.

Sto Corp.  
3800 Camp Creek Parkway  
Building 1400, Suite 120  
Atlanta, GA 30331

Tel: 404-346-3666  
Toll Free: 1-800-221-2397  
Fax: 404 346-3119

[www.stocorp.com](http://www.stocorp.com)

S155-80727  
Revision: A3.1  
Date: 04/2018

## Attention

This product is intended for use by qualified professional contractors, not consumers, as a component of a larger construction assembly as specified by a qualified design professional, general contractor or builder. It should be installed in accordance with those specifications and Sto's instructions. Sto Corp. disclaims all, and assumes no, liability for on-site inspections, for its products applied improperly, or by unqualified persons or entities, or as part of an improperly designed or constructed building, for the nonperformance of adjacent building components or assemblies, or for other construction activities beyond Sto's control. Improper use of this product or use as part of an improperly designed or constructed larger assembly or building may result in serious damage to this product, and to the structure of the building or its components. **STO CORP. DISCLAIMS ALL WARRANTIES EXPRESSED OR IMPLIED EXCEPT FOR EXPLICIT LIMITED WRITTEN WARRANTIES ISSUED TO AND ACCEPTED BY BUILDING OWNERS IN ACCORDANCE WITH STO'S WARRANTY PROGRAMS WHICH ARE SUBJECT TO CHANGE FROM TIME TO TIME.** For the fullest, most current information on proper application, clean-up, mixing and other specifications and warranties, cautions and disclaimers, please refer to the Sto Corp. website, [www.stocorp.com](http://www.stocorp.com).



## APPENDIX "B"

