



Sto Corp.  
3800 Camp Creek Parkway  
Building 1400, Suite 120  
Atlanta, GA 30331  
Phone: 404-346-3666  
Fax: 404-346-7422  
www.stocorp.com

## **Sto Short Form Guide Specification QS 300EV StoQuik® Silver NExT-Ventilated Cement Board Stucco System Section 07 24 00**

*Refer to long form specification QS 300EV for detailed information on substrates, performance data, mixing and installation*

### **PART 1 GENERAL**

#### **1.01 SUMMARY**

- A. StoQuik® Silver NExT-Ventilated System is a composite wall finish system consisting of a waterproofing/air barrier, base coat, reinforcing mesh and finish coat applied to a cement board complying with ASTM C 1325. The cement board is attached to framing over a code approved sheathing that is protected with the waterproofing/air barrier. The cement board is furred out from the sheathing to provide for drainage and ventilation.
- B. Limitations:
  - 1. This system is intended for use in residential and light commercial or institutional construction (low-rise, 3 stories or less).
  - 2. Minor surface cracking may occur due to stress induced by framing or thermal movement.
  - 3. Telegraphing of studs through finished wall surface may occur in some climates because of thermal bridging effects of studs.
  - 4. Planar irregularities/waviness may be visible in the finished wall surface because of out of plane studs or other framing irregularities. Heavy texture finishes (>1.5 mm aggregate) and/or two coats of base coat may be required in some cases to minimize the effects of planar irregularities or to improve appearance of fine texture finishes.
  - 5. Requires joints at areas of stress and at intervals to accommodate thermal movement as with conventional stucco wall assemblies.

#### **1.02 DESIGN REQUIREMENTS**

- A. L/360 maximum allowable stud deflection. Space studs 16 inches (406 mm) on center maximum. Provide horizontal blocking where needed for continuous support and attachment of cement board perimeter. Provide only kiln dried wood studs.
- B. Verify conformance of wall assembly wind load resistance with project design pressure requirements.
- C. Determine whether a vapor barrier is appropriate in the wall assembly. Refer to 2005 ASHRAE Handbook Fundamentals, Chapter 25. Do not use vapor barrier on the inside of wall assemblies in hot, humid climates or on the exterior in cold climates.
- D. Prevent water infiltration into or behind the cement board stucco system (refer to Sto Hotline Nos. 0403-BSc, Critical Detail Checklist for Wall Assemblies, and 0603-BSc, Moisture Control Principles for Design and Construction of Wall Assemblies). For drainage provide furring. For drainage and ventilation provide furring and venting at top and bottom termination points of wall assembly.
- E. Provide expansion joints at floor lines, dissimilar materials, where framing material changes, changes in building height, shape or structural system, and at expansion joints in the framing

or building. Provide control joints at intervals of 25 ft (7.6 m) maximum in each direction with length/width ratio not to exceed 2-1/2:1. Maximum allowable area without a control joint is 625 ft<sup>2</sup> (58 m<sup>2</sup>). When using dark color finishes (lightness value less than 50) the allowable control joint interval/area is reduced to 16 ft/256 ft<sup>2</sup> (4.68 m/23.5 m<sup>2</sup>).

- F. Select colors with a lightness value of 30 or more. Refer to Sto Color Chart.
- G. When adding foam trim features use foam plastic in compliance with the applicable code. Refer to IBC Chapter 26 and Sto ICC ES Evaluation Report No 1720. Reinforce all foam trim with base coat and reinforcing mesh. Comply with thickness and slope limitations for foam trim. Refer to Sto Details.
- H. Where fire rated wall construction is required, start with an existing hourly rated assembly. The addition of the StoQuik Silver NExT-Ventilated to an existing hourly fire-resistive wall assembly will not detract from the rating. For noncombustible Type construction special detailing is required at the heads of windows, doors and similar through wall penetrations.
- I. Not intended for use below grade. Maintain minimum 4 inches (102mm) above earth grade and 2 inches (51mm) above pavement. Increase distance above grade for snow regions.
- J. Do not use as a parapet coping or for other non-vertical weather exposed surfaces.

### 1.03 DELIVERY, STORAGE AND HANDLING

- A. Deliver all materials in their original sealed containers bearing manufacturer's name and identification of product.
- B. Protect coatings (pail products) from freezing and temperatures in excess of 90°F (32° C). Store away from direct sunlight.
- C. Protect portland cement based materials (bag products) from moisture and humidity. Store under cover and off the ground in a dry location.
- D. Store cement board materials inside and protected from damage by the elements. Protect ends, edges, and faces of cement boards from damage

### 1.04 COORDINATION/SCHEDULING

- A. For load bearing stud wall assemblies, commence the cement board system installation after completion of all floor, roof construction and other construction that imposes dead loads on the walls to prevent excessive deflection (and potential cracking) of the cement board system.
- B. Sequence interior work such as drywall installation prior to cement board system installation to prevent stud distortion (and potential cracking) of the cement board system.
- C. Provide site grading such that the stucco terminates above earth grade minimum 4 inches (102 mm) and above finished grade (pavers/sidewalk) minimum 2 inches (51 mm). Provide increased clearance above grade for snow regions.
- D. Provide protection of rough openings before installing windows, doors, and other penetrations through the wall and provide sill flashing. Coordinate installation of water-resistive barrier with window and door installation to provide weather proofing of the structure and to prevent moisture infiltration and excess air infiltration.

- E. Install window and door head flashing immediately after windows and doors are installed.
- F. Install diverter flashings wherever water can enter the wall assembly to direct water to the exterior.
- G. Install copings and sealant immediately after installation of the cement board stucco system and when finish coatings are dry.
- H. Attach penetrations through the cement board stucco system to structural support and provide watertight seal at penetrations.

## **PART 2 PRODUCTS**

### **2.01 MANUFACTURERS**

- A. Sto Corp.— StoQuik Silver NExT-Ventilated: Water-resistive barrier, primer (if used), meshes, base coat and finish coat as furnished by Sto Corp.
- B. Plastic Components, Inc.— Accessories as furnished by Plastic Components, Inc., 9051 NW 97th Terrace, Miami, Florida 33178 (800 327-7077).
- C. National Gypsum Company, Inc.-PermaBase® Brand Cement Board as furnished by National Gypsum Company, Inc. 2001 Rexford Road, Charlotte, NC 28211 (704 365 7300)

### **2.02 SHEATHINGS** (supplied by others)

- A. Exterior or Exposure 1 Plywood
- B. Exposure 1 Oriented Strand Board (OSB)
- C. Glass Mat Faced Gypsum Sheathing (ASTM C 1177)
- D. Water-Resistant Core Gypsum Sheathing (ASTM C1396)

### **2.03 WATER-RESISTIVE BARRIER**

- A. StoGuard™
  - 1. Joint Treatment: Sto Gold Fill® -- ready mixed flexible joint treatment for rough opening protection and joint treatment of wall sheathings.
  - 2. Water-Resistive Coating: Sto EmeraldCoat® --ready mixed vapor permeable, waterproof coating for wall sheathing.

### **2.04 CEMENT BOARD**

- A. Minimum ½ inch (13 mm) thick PermaBase® Brand Cement Board complying with ASTM C 1325

### **2.05 MECHANICAL FASTENERS** (supplied by others)

- A. Appropriate non-corroding fasteners, depending on the type framing or substrate:

1. Wood Framing—minimum # 9, Type S wafer head fully threaded corrosion resistant screws with minimum 3/4 inch (19 mm) penetration into studs.
2. Steel Framing—minimum # 8 Type S-12 wafer head fully threaded corrosion resistant screws with minimum 3/8 inch (10 mm) penetration into studs.

## 2.06 BASE COAT *(select one)*

### A. Cementitious Base Coat

1. Sto Primer/Adhesive-B—one-component polymer modified cement based factory blend base coat with less than 33% portland cement content by weight.
2. Sto BTS® *Plus*—one-component, polymer-modified, cement based high build adhesive with less than 33 percent portland cement content by weight.
3. Sto BTS® *Xtra*—A lightweight, one component, polymer modified, cement based high build base coat.

### B. Waterproof Base Coat

1. Sto Flexyl—two component fiber reinforced acrylic based waterproof base coat mixed with Portland cement (for use as a waterproof base coat to waterproof foundations, parapets, splash areas, trim and other projecting architectural features).

## 2.07 REINFORCING MESH

### A. Standard Mesh

1. Sto Mesh--nominal 4.5 oz./yd<sup>2</sup> (153 g/m<sup>2</sup>), symmetrical, interlaced open-weave glass fiber fabric made with alkaline resistant coating for compatibility with Sto materials (achieves Standard Impact Classification when used with foam trim).

### B. Specialty Meshes

1. StoGuard™ Mesh- nominal 4.2 oz./yd<sup>2</sup> (142 g/m<sup>2</sup>), self-adhesive, flexible, symmetrical, interlaced glass fiber fabric, with alkaline resistant coating for compatibility with Sto materials (used to reinforce cement board joints, corners of openings and accessory flanges).
2. Sto Detail Mesh--nominal 4.2 oz./yd<sup>2</sup> (143 g/m<sup>2</sup>), flexible, symmetrical, interlaced glass fiber fabric, with alkaline resistant coating for compatibility with Sto materials (used for foam shape backwrapping, aesthetic detailing, and as an alternative to StoGuard Mesh reinforcement).
3. Sto Corner Mat--nominal 7.7 oz./yd<sup>2</sup> (261 g/m<sup>2</sup>), pre-creased, heavy-duty, open-weave woven glass fiber fabric with alkaline resistant coating for compatibility with Sto materials (used for maximum impact protection at inside and outside corners).

## 2.08 PRIMER

- A. Sto Primer— Any Sto acrylic based tinted primer.

## 2.09 FINISH COAT

- A. Sto Finish—Any Sto acrylic or silicone enhanced acrylic based textured wall coating.

## 2.10 ACCESSORIES *(supplied by others)*

- A. Starter Track— Vent Screen TRAC®, a rigid PVC (polyvinyl chloride) plastic track with double row of drainage holes, Part No. VST-75 as furnished by Plastic Components, Inc.
- B. Surface Mounted “L” Bead— a rigid PVC (polyvinyl chloride) surface mounted “L” shaped bead for terminations, openings, etc, Part No. 2221-50 as furnished by Plastic Components, Inc.
- C. Casing Bead—CB Casing Bead, a rigid PVC (polyvinyl chloride) plastic accessory for sheathing termination points Part No. CB-75-16 as furnished by Plastic Components, Inc.
- D. Corner Bead—Corner Bead a rigid PVC (polyvinyl chloride) plastic accessory for smooth transitions at exterior corners, Part No. 2209 as furnished by Plastic Components, Inc.
- E. Control Joint—Control Joint a rigid PVC (polyvinyl chloride) plastic accessory for designed control joints, Part No. 220027-16 as furnished by Plastic Components, Inc.
- F. Furring Strips—Strip-Lath®, a rust proof, self-furring, damage-resistant, ULTRA-LATH® strips of plastic lath for allowing drainage of incidental moisture to the exterior. Part Nos. PDM3 or PDM4 as furnished by Plastic Components, Inc.

## 2.11 JOB MIXED INGREDIENTS

- A. Water—clean and potable.
- B. Portland cement – ASTM C150, Type I, Type II, or Type I-II

## 2.12 FOAM BUILD-OUTS

- A. Adhesive (see 2.06 for product descriptions) (select one)
  - 1. Sto Primer Adhesive-B
  - 2. Sto BTS® Plus
  - 3. Sto BTS® Xtra
- B. Insulation Board
  - 1. Sto EPS Insulation Board--nominal 1.0 lb/ft<sup>3</sup> (16 kg/m<sup>3</sup>) Expanded Polystyrene (EPS) Insulation Board in compliance with ASTM C 2430.
- C. Reinforcing Mesh (see 2.07 for product descriptions) (select one):
  - 1. Sto Mesh
  - 2. Sto Detail Mesh
- D. Base Coats (see 2.06 for product descriptions) (select one or more as dictated by project design details):
  - 1. Sto Primer/Adhesive-B
  - 2. Sto BTS® Plus
  - 3. Sto BTS® Xtra
  - 4. Sto Flexyl (for use as a waterproof base coat to waterproof foundations, parapets, splash areas, trim and other projecting architectural features).

## PART 3 EXECUTION

### 3.01 INSTALLATION

- A. Install cement board stucco system in conformance with manufacturer's published instructions.

### 3.02 PROTECTION

- A. Provide protection of installed materials from water infiltration into or behind them.
- B. Provide protection of installed materials from dust, dirt, precipitation, freezing and continuous high humidity until they are fully dry.

### ATTENTION

Sto products are 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. They 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 Sto products or use as part of an improperly designed or constructed larger assembly or building may result in serious damage to Sto products, and to the structure of the building or its components.

**STO CORP. DISCLAIMS ALL WARRANTIES EXPRESS 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).