Building with conscience.

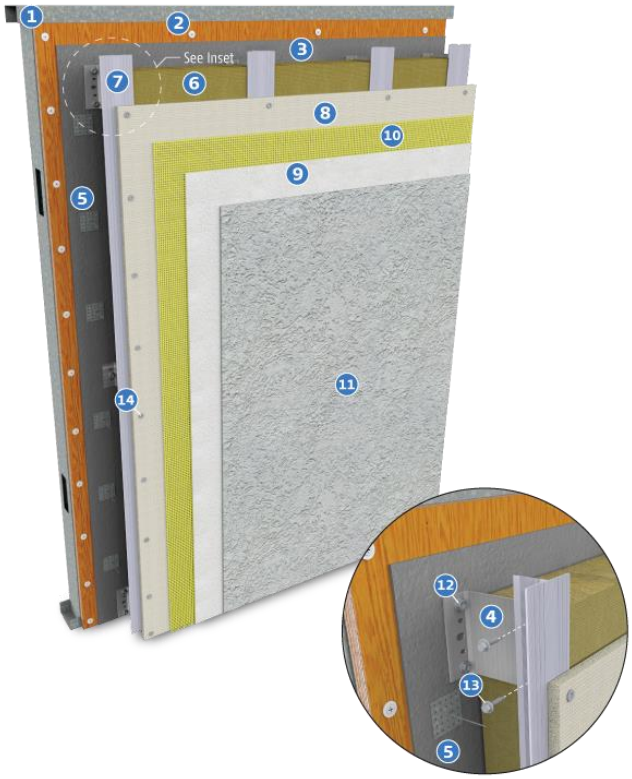
Sto Corp.
3800 Camp Creek Parkway
Building 1400, Suite 120
Atlanta, GA 30331
Tel: 404-346-3666
Toll Free: 1-800-221-2397
Fax: 404-346-3119
www.stocorp.com

Sto Guide Specification 90H.01
Sto High Velocity Hurricane Zone (HVHZ) System

StoVentec® Render

Section 07 44 00

This specification is intended for use by the design/construction professional and any user of Sto products to assist in developing project specifications and to provide guidance on the application of a Sto High Velocity Hurricane Zone (HVHZ) System, StoVentec® Render, to vertical above grade exterior wall construction. StoVentec® Render (Plywood or concrete substrate – Large Missile impact resistance) is a drained, back-ventilated rainscreen wall system from a single source that incorporates a continuous air and water-resistive barrier, continuous noncombustible mineral wool insulation, and sub-construction for an architectural finish system (render) applied to a carrier board manufactured from recycled glass that complies with Florida Building Code (FBC) and Miami-Dade County, Florida requirements for use in High Velocity Hurricane Zones, and is compliant with requirements for Large Missile and Small Missile Impact Resistance with a Design Pressure of up to ± 80 psf (3.83 kPa).



No.	Components
1	6-in (152mm), 18 Ga Steel Studs at 16-in (406mm) oc OR Nom. 2x4 SPF Grade 2 Kiln Dried Wood Studs at 16-in (402mm) oc
2	5/8-in (16mm) CDX 5-Ply Exterior Grade Plywood
3	StoGuard® with Sto AirSeal®
4	StoVentro® Bracket
5	Insulation Support/Fixing
6	Mineral Wool Insulation Board
7	StoVentro T-Profile (90mm)
8	StoVentec Carrier Board
9-11	Sto Basecoat, Mesh, and Finish
12	Anchoring element (Bracket to Wall) per structural analysis
13	StoVentro Sub-construction Screw
14	StoVentec Render Façade Screw
Note: components not identified as Sto are furnished by other manufacturers and are not necessarily installed by trades who install the Sto products. Refer to project specific contract documents.	

Table of Contents

PART 1 GENERAL

1.1 SUMMARY

A. Provide High Velocity Hurricane Zone (HVHZ), Large Missile (LM) Impact Resistant exterior rainscreen cladding system that complies with requirements of the Florida Building Code (FBC) and Miami-Dade County, Florida.

Add/delete Sections, depending on specific project requirements

B. Related Sections

1. Section 03 00 00: Concrete
2. Section 04 00 00: Unit Masonry
3. Section 05 40 00: Cold-Formed Metal Framing
4. Section 06 10 00: Rough Carpentry
5. Section 06 16 00: Sheathing
6. Section 07 26 00: Vapor Retarders
7. Section 07 27 00: Air Barriers
8. Section 07 50 00: Membrane Roofing
9. Section 07 62 00: Sheet Metal Flashing and Trim
10. Section 07 80 00: Fire and Smoke Protection
11. Section 07 90 00: Joint Protection
12. Section 08 10 00: Doors and Frames
13. Section 08 40 00: Entrances, Storefronts, and Curtain Walls
14. Section 08 50 00: Windows
15. Section 09 25 13: Acrylic Plastering

1.2 SUBMITTALS

A. Manufacturer's Florida Building Code (FBC) Product Approval Number or Miami-Dade County NOA (Notice of Acceptance)

B. Manufacturer's specifications, details, installation instructions, and product data

C. Manufacturer's standard warranty

D. Applicator's industry training credentials

E. Samples for approval as directed by architect or owner

F. Sealant manufacturer's certificate of compatibility

G. Prepare and submit project-specific engineering calculations and details (when required by contract documents)

1.3 REFERENCES

A. AAMA Standards

1. AAMA 509, Voluntary Test and Classification Method for Drained and Back Ventilated Rain Screen Wall Cladding Systems

B. ASTM Standards

1. C612, Standard Specification for Mineral Fiber Block and Board Thermal Insulation
2. C920, Standard Specification for Elastomeric Joint Sealants
3. C1177, Specification for Glass Mat Gypsum for Use as Sheathing
4. E84, Test Method for Surface Burning Characteristics of Building Materials
5. E96, Standard Test Methods for Water Vapor Transmission of Materials
6. E119, Method for Fire Tests of Building Construction and Materials
7. E283, Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Skylights, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen
8. E330, Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference
9. E331, Standard Test Method for Water Penetration of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference
10. E2178, Standard Test Method for Determining Air Leakage Rate and Calculation of Air Permeance of Building Materials
11. E2357, Standard Test Method for Determining Air Leakage Rate of Air Barrier Assemblies

C. Florida Product Approval

1. FBC Product Approval with HVHZ Yes: 41659, StoVentec Render and Masonry Veneer Facades

D. International Organization for Standardization (ISO)

1. ISO 9001, Quality Management Systems – Requirements
2. ISO 14001, Environmental Management Systems – Requirements with Guidance for Use

E. Miami-Dade County Notice of Acceptance

1. NOA No. 25-0610.02

F. Florida Building Code Test Standards

1. TAS 201, Testing Application Standard (TAS) 201-94, Impact Test Procedures
2. TAS 202, Testing Application Standard (TAS) 202-94, Criteria for Testing Impact and Non-Impact Resistant Building Envelope Components Using Uniform Static Air Pressure
3. TAS 203, Testing Application Standard (TAS) 203-94, Criteria for Testing Products Subject to Cyclic Wind Pressure Loading

G. National Fire Protection Association (NFPA) Standards

H. NFPA 285, Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Wall Assemblies Containing Combustible Components

I. Sto Publications

1. StoVentec Render Installation Guide
2. StoVentec Render Design Guide and Detail Booklet
3. Sto reStore Repair and Maintenance Guide

1.4 DESIGN REQUIREMENTS

Add/delete or modify depending on specific project requirements

A. Wall Assembly Design Pressure Rating: plus or minus 80 psf (3.83 kPa)

B. Rainscreen Render Cladding Wall Assembly: fully compliant with Florida Building Code (FBC) and Miami-Dade County criteria for Large and Small Missile impact resistance, drainage efficiency, air leakage and water penetration resistance, and for use on non-combustible construction for buildings of any height

C. Rainscreen Render System Joint requirements:

1. at existing movement joints in back-up wall construction
2. at through wall joints in back-up wall construction
3. at dissimilar back-up wall construction (e.g., frame wall to masonry wall)
4. at floor line deflection joints in steel frame construction
5. at floor lines in multi-level wood-frame construction
6. at intervals of not more than 82 feet (25m) in the field of walls
7. at junctions or abutments to dissimilar building components – windows, doors, alternative facade materials, pipe, scupper and similar through wall penetrations
8. Size joints in accordance with anticipated movement
9. Indicate location of joints, accessories and accessory type on architectural drawings

1.5 PERFORMANCE REQUIREMENTS

A. Air and Water-Resistive Barrier (AWRB)

1. Air leakage less than 0.004 cfm/ft^2 (0.02 L/s·m^2) at 1.57 psf (75 Pa) when measured in accordance with ASTM E2178
2. Assembly air leakage less than 0.04 cfm/ft^2 (0.2 L/s·m^2) after conditioning protocol when measured in accordance with ASTM E2357
3. Meets requirements for use as a Water-Resistive Barrier (WRB) Coating for use under EIFS wall covering when tested in accordance with ASTM E2570
4. Vapor Permeable, water vapor permeance greater than 10 perms when measured in accordance with ASTM E96, Method B

B. Insulation

1. Non-combustible mineral wool insulation as defined by NFPA 220 in compliance with ASTM E136 and C612 Type IV requirements with 0 flame spread and 0 smoke development when measured in accordance with ASTM E84

C. Sub-Construction

1. StoVentro Brackets –

   a. Steel: Small (GP) and Large (FP), 2.0mm (~1/16in) thickness, Zn-Al-Mg coated steel (HSLAS-F Gr 80 + ZM115)

   b. Aluminum: Small (GP) and Large (FP), 3.2mm (1/8 in)-4.2mm (3/16 in) thickness, 6063-T66 aluminum alloy

2. Profiles - Minimum 2.0mm (~1/8in) Type 6063 T-66 or 6005A-T5 aluminum alloy T-Profiles and L-Profiles

D. Fire Break

NOTE: select one fire break method. Refer to applicable code for metal fire breaks and Sto guide details for others

1. Metal Fire Break - Minimum 0.38mm corrosion resistant metal of sufficient dimension to overlap inner face of the carrier board
2. Composite Fire Break – Sto Lamella Mineral Wool – Nominal 8.5lb/ft^3 (136.2 kg/m^3) density, minimum 4 in (~100mm) tall non-combustible mineral wool insulation lamella strip (fibers oriented perpendicular to wall), faced with intumescent tape, nominal 75 lb/ft^3 (1200 kg/m^3) flexible intumescent material of exfoliated graphite that foams up under influence of pressure and temperature
3. Dual Barrier Fire Break – Sto Lamella nominal 8.5lb/ft^3 (136.2 kg/m^3) density, minimum 4 in (~100mm) tall non-combustible mineral wool insulation lamella strip (fibers oriented perpendicular to wall), cut for compression fit between vertical T-Profiles, and combined with metal fire break, minimum 0.38mm corrosion resistant metal of sufficient dimension to overlap inner face of the carrier board

E. Rainscreen Render Cladding and AWRB Wall Assembly

1. Meets Large Missile Impact resistance and wind load criteria of TAS 201, 202, and 203 with a design pressure rating of plus or minus 80 psf (3.83 kPa) with concrete, CMU, or 16 in. o.c. stud wall with min. 5/8 in. (5-ply) C-D Exposure 1 plywood sheathing
2. Meets acceptance criteria of NFPA 285 for use on non-combustible construction (concrete backup assembly, stud wall with exterior gypsum sheathing)
3. Maintains hourly fire resistance rating of known, hourly rated base wall assembly when tested in accordance with ASTM E119 (stud wall with exterior gypsum sheathing)
4. No water penetration when subjected to 120 minutes of water spray at 6.24 psf (299 Pa) nor with additional 15 minutes of water spray at 15 psf (720 Pa) and 15 minutes at 20 psf (960 Pa) and measured in accordance with ASTM E331
5. Architectural Finish – ASTM E2568, Table 1, compliant finish system, consisting of ready mixed acrylic-based high build base coat, treated glass fiber reinforcing mesh, nominal 6 oz/yd^2 (203.4 g/m^2), and acrylic-based textured finish

1.6 COMPLIANCE

A. Rainscreen Render Wall Cladding Assembly

1. Complies with FBC and Miami-Dade County requirements for use in High Velocity Hurricane Zones, and for use on buildings required to have Large Missile Impact resistance
2. Complies with FBC and Miami-Dade County requirements for use on non-combustible construction

B. Air and Water-Resistive Barrier

1. Complies with FBC and Miami-Dade County requirements for allowable material and assembly air leakage

C. Joint Sealant for Use with Render (optional)

1. Conforms with ASTM C920: Type S, Grade NS, Use NT, A, M, Class 100/50

1.7 QUALITY ASSURANCE

A. Manufacturer Requirements

1. Manufacturer facilities audited by a quality assurance entity approved by the Florida Building Commission
2. Manufacturing facilities in compliance with ISO 9001 Certified Quality System and ISO 14001 Certified Environmental Management System

B. Contractor Requirements

1. Engaged in application of similar systems for a minimum of three (3) years
2. Knowledgeable in the proper use and handling of Sto materials
3. Employ skilled mechanics who are experienced and knowledgeable in air and water-resistive barrier and rainscreen cladding application, and familiar with the requirements of the specified work
4. Successful completion of minimum of three (3) projects of similar size and complexity compared to the specified project
5. Provide the proper equipment, manpower and supervision on the job site to install the system in compliance with Sto's published specifications and details and the project plans and specifications

C. Substrate Requirements

1. All substrates shall be in compliance with the applicable building code for strength, durability, resistance to weather, fire resistance, and other safety requirements
2. Glass mat gypsum sheathing shall be in conformance with ASTM C1177. Surface shall be clean, dry, and free of frost, damage, dust, dirt, oil or other contaminants that could interfere with adhesion of the AWRB components.
3. Plywood: shall be minimum min. 5/8 in. (5-ply) C-D Exposure 1 plywood sheathing. Surface shall be clean, dry, and free of frost, damage, dust, dirt, oil or other contaminants that could interfere with adhesion of the AWRB

D. Mock-up Testing

1. Construct full-scale mock-up of typical air and water-resistive barrier and StoVentec Render/window wall assembly with specified tools and materials and test air leakage, water infiltration and structural performance in accordance with ASTM E283, ASTM E331 and ASTM E330, respectively, through independent laboratory. Mock-up shall comply with requirements of project specifications. Where mock-up is tested at job site maintain approved mock-up at site as reference standard. If tested off-site accurately record construction detailing and sequencing of approved mock-up for replication during construction.

E. Inspections

1. Provide independent third-party inspection where required by code or contract documents
2. Conduct inspections in accordance with code requirements and contract documents

1.8 DELIVERY, STORAGE AND HANDLING

A. Deliver all materials in their original sealed containers bearing manufacturer's name and identification of product. Store cartons and bundles of material inside in a dry area until ready for use on pallets. Store off the ground on pallets in a dry location out of direct sunlight during installation.

B. Store portland cement based (bag) products in a dry area off the ground out of direct sunlight

C. Store wet products (pail products) in a dry area and protect from extreme heat, 90 degrees F (32 degrees C), freezing, and direct sunlight

D. Store sealant (cartridge and sausage products) in a cool (less than 80 degrees F [26.7 degrees C]) dry area. Protect from heat, freezing, moisture, and direct sunlight. Store away from sources of ignition.

E. Store accessories (mesh, tapes, fabrics, and pvc components in cartons) flat, off the ground in a dry location. Protect from direct sunlight. Store mesh roll cartons flat (not upright).

F. Store gun-grade air barrier component at temperatures between 40 and 80°F (4 and 26°C), and protect from freezing, moisture, direct sunlight, and keep away from sources of ignition

1.9 PROJECT/SITE CONDITIONS

Weather conditions affect application and drying time of products. Hot or dry conditions limit working time and accelerate drying and may require adjustments in the scheduling of work to achieve desired results; cool or damp conditions extend working time and retard drying and may require added measures of protection against wind, dust, dirt, rain and freezing (Exception: gun-grade air barrier component dries faster in damp or high humidity conditions)

A. Maintain ambient and surface temperatures above 40°F (4°C) during application and drying period, minimum 24 hours after application of air and water-resistive barrier and Render lamina (basecoat and finish).

B. Provide supplementary heat for installation of sub-construction in temperatures less than 25°F (-3.8°C)

C. Provide supplementary heat for installation of basecoat and finish in temperatures less than 40°F (4°C)

D. Provide protection of surrounding areas and adjacent surfaces from application of products

1.10 COORDINATION/SCHEDULING

The work in this section requires close coordination with related sections and trades. Sequence work to provide protection of construction materials from weather deterioration

A. Provide site grading such that the wall cladding assembly terminates above grade a minimum of 6 inches (150 mm) or as required by code

B. Provide roofing and protection at roof and floor levels to prevent water entry to the interior or into and behind the exterior wall system during construction.

C. Coordinate installation of foundation waterproofing, roofing membrane, windows, doors and other wall penetrations to provide a continuously connected air and water-resistive barrier

D. Provide protection of rough openings before installing windows, doors, and other penetrations through the wall

E. Install fire breaks at floor lines, openings, and other required locations

F. Install sub-construction after air and water-resistive barrier is completely dry

G. Install continuous insulation between or over sub-construction

H. Install window and door head flashing immediately after windows and doors are installed

I. Install diverter flashings wherever water can enter the wall assembly to direct water to the exterior

J. Install splices or tie-ins from air and water-resistive barrier over back leg of flashings, and similar details, to form a shingle lap that directs water to the exterior

K. Install copings and sealant immediately after installation of the finished wall assembly when coatings are dry, and such that, where sealant is applied against the carrier board surface, it is applied against the base coat or primed base coat surface.

L. Schedule work such that the air and water-resistive barrier is exposed to weather no longer than the period allowed by the manufacturer

M. Attach penetrations through the cladding to structural support and provide watertight seal at penetrations.

1.11 WARRANTY

A. Provide manufacturer's standard warranty

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Provide air and water-resistive barrier, rainscreen sub-construction, and Rainscreen Render cladding components from single source manufacturer or approved supplier

B. The following are acceptable manufacturers:

1. Sto Corp. – air and water-resistive barrier, sub-structure, mineral wool fire barrier, carrier boards, components, and accessories

a. Sto Corp., 3800 Camp Creek Parkway, Building 1400, Suite 120, Atlanta, GA 30331
Tel: 800 221 2397, www.stocorp.com

2. Rockwool – mineral wool insulation

a. Rockwool, Inc. - 8024 Esquesing Line, Milton, Ontario, Canada L9T 6W3
Tel: 800-265-6878, www.rockwool.com/north-america

3. Kuhn Odice – ROKU Strip - flexible intumescent tape

a. ROKU® Strip | Intumescent graphite fire protection strips

2.2 AIR AND WATER-RESISTIVE BARRIER

A. StoGuard Detail Components for sheathing joint treatment, rough opening protection, counterflashing, and static joints and seams:

Choose one or more components as needed for the work

1. Sto AirSeal used with StoGuard Fabric reinforcement

2. Sto RapidGuard: single component rapid drying gun-applied STPE detail component
3. StoGuard Conformable Membrane: self-adhered membrane flashing

B. Static and Dynamic Joints

1. StoGuard Conformable Membrane: self-adhered membrane

C. Air and Water-resistive Barrier Coating

1. Sto AirSeal: ready mixed vapor permeable air and water-resistive barrier coating applied by brush, roller, or airless spray

2.3 INSULATION

1. Rockwool Cavityrock® or Cavityrock Black mineral wool insulation board in conformance with ASTM C612, Type IV requirements, nominal 4.3 lb/ft^3 density (0.28 kg/m^3), and R-4.3 per inch (RSI - 0.74 per 25mm)

a. Minimum 2 inch thickness for construction Types I-IV is required to satisfy code requirements for NFPA 285 with respect to combustible AWRBs.

2.4 FLOOR LINE FIRE STOP

Note: A, B, and C are acceptable alternatives.

A. Metal fire break

1. Minimum 0.38mm corrosion resistant metal of sufficient dimension to overlap inner face of the carrier board

B. Composite Fire Break - mineral wool insulation with surface mount intumescent tape:

1. Sto Lamella mineral wool insulation board in conformance with ASTM C612, Type IV requirements, nominal 8.5 lb/ft^3 density (136.2 kg/m^3), and R-3.2 per inch (RSI - 0.56 per 25mm) with glass fibers oriented perpendicular to the plane of the wall.
2. Kuhn Odice 2mm (~1/16in) ROKU® intumescent strip with adhesive backing (field applied over insulation – refer to Sto Details)

C. Dual Barrier Fire Break – mineral wool insulation with metal fire break and intumescent tape

1. Sto Lamella mineral wool insulation board in conformance with ASTM C612, Type IV requirements, nominal 8.5 lb/ft^3 density (136.2 kg/m^3), and R-3.2 per inch (RSI - 0.56) with glass fibers oriented perpendicular to the plane of the wall.
2. Minimum 0.38mm corrosion resistant metal of sufficient dimension to overlap inner face of carrier board (field applied over insulation – refer to Sto Details)

2.5 RAINSCREEN SUB-CONSTRUCTION

A. StoVentro™ Brackets –

Note: select bracket metal type and depth(s)

1. Steel: Small (GP) and Large (FP), Zn-Al-Mg coated steel: 40-360mm depths (20mm increments) (1-9/16" to 14-3/16" in 13/16" increments)

2. Aluminum: Small (GP) and Large (FP): 40-320mm depths (20mm increments) (1-9/16" to 12-9/16" in 13/16" increments)

B. StoVentro™ T-Profile and L-Profile – 2.0mm (~1/16in) aluminum vertical and horizontal profiles

1. T-Profiles (90mm wide version) for intermediate/field fastening and vertical panel joint locations

2. L-Profiles for end conditions/terminations and outside corner stiffening

C. StoVentro™ Sub-construction Screw – 5.5x19mm or 22mm (~3/16 x ¾ or 7/8in) S8 stainless steel hex head fasteners for securing StoVentro T-Profiles and L-Profiles to StoVentro Brackets

2.6 CARRIER BOARD

A. StoVentec Carrier Board 4x8 feet (1220x2440mm) by 12mm (1/2 in.) thick

2.7 ACCESSORIES

A. Sto Starter Profile PH-K for support of insulation board at base of wall

B. Sto Edge Protection Profiles (G, GT, GF) with integral glass fiber reinforcing mesh for protecting exposed ends and edges of 12mm (~1/2 in) carrier board

C. Sto-Mesh Corner Bead Standard with integral glass fiber reinforcing mesh for outside corner reinforcement

D. Sto Drip Edge Profile with integral glass fiber reinforcing mesh for soffit returns

E. StoVentro Render Façade Screw - 5.5x24mm (~3/16 x 1in) flat head fasteners for carrier board to T-profile connection, 6.0x28mm (~1/4 x 1-1/8in) flat head fasteners for carrier board to steel stud connection

F. Sto Roof Vent Profiles (G-Roof Vent, G-Rain Guard) for protecting exposed edge of carrier board or venting at top of wall

G. Sto Ventilation Profile (ALU 30/40, ALU 40/100) for ventilation at base of wall

H. Stainless steel flashing, trim and corners (by others)

I. Aluminum Trims and accessories (by others)

J. Stainless steel fasteners for mounting brackets to steel stud, wood stud, concrete, or concrete masonry back-up wall construction (by others)

K. Fasteners, impaling pins, or other attachment devices for mounting insulation, floor line fire break materials (by others)

L. StoSeal STPE Sealant - high-movement, medium modulus, non-sag one-component silyl-terminated polyether joint sealant in compliance with ASTM C920 (Type S, Grade NS, Use NT, A, M, Class 100/50) and tested in accordance with ASTM C1382

2.8 ARCHITECTURAL FINISH SYSTEM: STO RENDER

A. Base Coat - StoArmat Classic plus ready mixed acrylic-based fiber reinforced plaster

B. Reinforcement

1. Sto Mesh 6oz – nominal 6 oz/yd^2 (203.4 g/m^2) glass fiber reinforcing mesh treated for compatibility with Sto materials

Note: primer component is optional, except for some Sto Specialty Finishes; refer to the applicable Sto finish Product Bulletin

C. Primer – StoPrime acylic-based sanded primer

Note: select one finish

D. Finish

1. Stolit® ready mixed acrylic-based integrally colored textured finish or other Sto approved textured finish
2. Stolit® Lotusan® ready mixed finish with self-cleaning properties (Lotus-Effect™ Technology)
3. Stolit® ready mixed acrylic-based integrally colored textured finish with StoColor® Dryonic® top-coat applied in two coats for speed drying of façades and enhanced resistance to algae, mold, and mildew.

E. StoCast resin shapes

Note: alternatives to Finish options, select one shape

1. StoCast Brick
   a. Sto Bonding and Pointing Mortar integrally colored organic mortar
   b. StoCast Brick lightweight, flexible resin cast brick
2. StoCast Wood
   a. StoCast Wood Adhesive one component adhesive compatible with multiple substrates
   b. StoCast Wood lightweight, flexible resin cast wood grain planks
   c. StoColor® Wood Stain acrylic-based stain topcoat over StoCast Wood

2.9 MIXING

A. Refer to manufacturer's applicable product bulletins for mixing of materials

PART 3 EXECUTION

3.1 ENGINEERING AND SHOP DRAWINGS

A. Cladding sub-contractor shall provide shop drawings with details at joints, seams, penetrations, and connections at foundation and roofing for air barrier continuity; spacing, layout and connections of sub-construction components (including fixed or sliding point brackets) and connections (fixed or sliding point); location and type of fire breaks; layout, connections, and joint spacing between wall sections; sill flashing, copings, jamb closures

3.2 ACCEPTABLE INSTALLERS

A. Prequalify under Quality Assurance requirements of this specification (Section 1.7)

3.3 EXAMINATION

A. Inspect all surfaces to receive the wall system. Surfaces must be fully cured, structurally sound, clean, dry and free of frost, damage, and all bond inhibiting materials, including dirt, dust, efflorescence, form oil and other foreign matter.

B. Inspect sheathing surfaces for compliance with this specification, the applicable building code, and manufacturer requirements.

C. Inspect surface plane for compliance with tolerance of not greater than ¼ inch in 10 feet [6mm in 3.0m] deviation in plane.

D. Report deviations from the requirements of project specifications or other conditions that might adversely affect the air and water-resistive barrier, sub-construction, insulation board, carrier board, coatings, or finish system installation to the General Contractor. Do not start work until deviations are corrected.

3.4 SURFACE PREPARATION

A. Remove surface contaminants from gypsum and/or wood sheathing surfaces

B. Fill large gaps between sheathing or voids around pipe, conduit, scupper, and similar penetrations with spray foam and shave flush with surface (refer to Sto Details)

C. Replace weather-damaged sheathing and repair or replace damaged or cracked sheathing

3.5 INSTALLATION

Refer to applicable Sto product bulletins, StoVentec Render Installation Guide, and StoVentec Render Design Guide and Detail Booklet for general information on installation and details.

A. Install manufacturer's air and water-resistive barrier in conformance with manufacturer's written instructions

B. Install manufacturer's rainscreen sub-construction and render cladding in conformance with manufacturer's written instructions

3.6 PROTECTION

A. During installation, provide protection of materials from dust, dirt, precipitation, freezing, and continuous high humidity until they are fully dry

B. Provide protection of installed materials from water infiltration, mechanical or other damage during and after construction

3.7 CLEANING, REPAIR AND MAINTENANCE

A. Clean and maintain the finished wall surface for a fresh appearance and to prevent water entry into and behind the system. Repair cracks, impact damage, spalls or delamination promptly

B. Maintain adjacent components of construction such as sealants, windows, doors, and flashing, to prevent water entry into or behind the wall cladding assembly

C. Refer to Sto reStore Repair and Maintenance Guide for detailed information on restoration – cleaning, recoating, resurfacing and refinishing, or re-cladding

D. Attic Stock: as part of the contract documents, purchase and leave with the owner [insert no.] of pails of specific texture and color, which will be used later in case finish has to be repaired or touched up after the installation is complete

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.