

System Bulletin

StoVentec[®] Render

Rainscreen wall system with textured finish, continuous insulation and continuous air and water-resistive barrier



Structural Back-up Wall (by others): Steel or wood frame with glass mat gypsum sheathing in compliance with ASTM C1177, code compliant OSB or plywood sheathing, concrete or core filled concrete masonry, existing structurally sound, uncoated brick or other masonry wall construction.

1)	Air and Water-Resistive Barrier: Sto AirSeal [®]
2)	Sub-construction: StoVentro [™] Bracket, StoVentro [™] T-Profile
3)	Thermal Insulation: Owens Corning Thermafiber [®] RainBarrier 45
4)	Carrier Board: StoVentec [®] Carrier Board A+ with recycled glass granulate and double sided glass fiber mesh reinforcement
5)	<p>Architectural Finish System: Sto Render</p> <ul style="list-style-type: none"> • Base Coat: Sto Armat Classic plus • Reinforcement: Sto Mesh 6 oz • Textured Finish: Stolit (or other approved Sto textured finish) <p>Architectural Finish System: StoCast Brick or Wood</p> <ul style="list-style-type: none"> • Base Coat: Sto Armat Classic plus • Reinforcement: Sto Mesh 6 oz • StoCast Brick + StoCast Bonding & Pointing Mortar • StoCast Wood + StoCast Wood Adhesive and

Sto Top coat	
System Description	
StoVentec Render is a drained and back-ventilated rainscreen wall system from a single source that combines superior air and weather tightness with excellent thermal performance and fire protection. It incorporates noncombustible continuous exterior insulation and a continuous air and water-resistive barrier with StoVentro [™] Sub-construction and Sto finish systems to produce an advanced high performance wall assembly.	
Uses	
StoVentec Render can be used on interior or exterior residential, commercial, and institutional wall construction.	
Features	Benefits
Drained and back-ventilated rainscreen wall design	Excellent moisture control
High density mineral wool insulation	Continuous noncombustible exterior thermal control layer
Fully integrated seamless air and water-resistive barrier	Compatible air, water, and vapor control layer from a single source
Virtually unlimited finish color selection in multiple textures	Color and texture design freedom
Fire tested in accordance with NFPA 285	Can be used on all types of construction without height limitation ¹
Properties	
Weight (Variable based on cavity depth, does not include backup wall)	≈ 3.89 to ≈ 4.96 lb./ft ² ≈ 18.98 to ≈ 24.24 kg/m ²
Insulation combustibility, flame spread	Noncombustible, 0 flame spread, 0 smoke development
Insulation RSI value (R-value)	0.74 m ² •K / W per 25mm (~4.3 ft ² •h•°F / Btu per in)
Finish system	Wind, weather, and crack-resistant integrally colored textured finish on reinforced base coat
Warranty	
Ten year limited warranty	
Maintenance	
Requires periodic cleaning of finish and recoating to maintain appearance. Sealants and other façade components must be maintained to prevent water infiltration into or behind the system.	

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1. Some height restrictions apply based on ultimate wind load resistance of the system (see page 2)

Precautions and Limitations

Not for use on horizontal or low slope surfaces, below grade, roofs or roof-like surfaces, or in areas of water immersion, pooling or ponding water. For use on vertical above grade walls only.

Structural back-up wall must be level to within 6 mm in 3.0 m (~¼ inch in 10 ft)

Pull-out or withdrawal capacity of fasteners into structural wall must be sufficient to resist negative wind loads (with appropriate safety factor as required by applicable building code).

Wind load resistance: structural back-up wall construction must be designed for maximum allowable deflection of L/360, normal to the plane of the wall. Stud spacing: 406 mm (~16 inches) on center maximum. Refer to Sto Design Guide and Detail Booklet for wind load ratings.

Insulation board thickness: (Standard) 51- 178mm (~2-7 inches). Thicker insulation board available by custom order and with special design and engineering analysis by qualified design professional

Ventilation cavity depth: 20-50 mm (~13/16 - 2 inches).

Maximum span without joints: 25m (~82 feet), length to height ratio not in excess of 2.5:1. Joint width between spans: 20mm max joint (13/16 inch). Refer to Sto Design Guide and Detail Booklet for other joint requirements and locations.

Aesthetics: no color restrictions apply. When using dark colors (LRV < 50) decrease span between joints to accommodate thermal expansion and contraction. Decrease joint spacing as needed to accommodate render application in discrete panels and to avoid cold joints. Refer to Sto Tech Hotline 0893-EC for helpful tips on selection of colors and fade resistance.

Refer to specific component product bulletins and packaging for other limitations that apply on use, handling and storage of component materials.

Sustainable Design

Recycled content Carrier Board is comprised of 90+% post-consumer recycled glass

Regulatory Compliance and Standards Testing

IECC, ASTM E2178 Air barrier component complies with 2018 and 2021 IECC Section C402.5 as an air barrier material

ASTM C612 Insulation conforms to applicable standard for board thermal insulation

NFPA 220 Insulation complies with criteria for non-combustibility

ASTM E84 Insulation has 0 flame spread, 0 smoke development

NFPA 285 System meets requirements for use on all types of construction without height limitation (other than height restrictions based on wind load resistance)

AAMA 509 System achieved W1 water penetration rating and V9 ventilation rating

ASTM E330 System tested up to -7.66 kN/m² (-160 lb/ft²) without failure

ASTM E 2568 Finish system conforms with Table 1 performance criteria for weathering, freeze/thaw resistance, salt spray resistance, adhesion, water penetration resistance, and water resistance

IBC, IRC System WRB conforms with requirements of 2021, 2018, and 2015 IBC and IRC. See ICC-ESR 1233.

IECC System meets requirements for continuous insulation and ci R-value requirements for above grade walls of 2018 and 2021 IECC Section 402.2, and contributes to U-value for above grade walls when figuring compliance based on U-factor

Listings/Approvals NFPA 285 certification listing by Intertek: Design No. Sto/CWP 30-02

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StoVentec Glass

Rainscreen wall system with opaque glass, continuous insulation and continuous air and moisture barrier

	General code evaluation of Render system: Intertek Code Compliance Research Report 0454 Miami-Dade NOA No. 22-1103.02
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<p>Sto Corp. 3800 Camp Creek Parkway Building 1400, Suite 120 Atlanta, GA 30331</p> <p>Tel: 404-346-3666 Toll Free: 1-800-221-2397 Fax: 404 346-3119</p> <p>www.stocorp.com</p>	<p>SB-9000G Revision: 000 Date: 01/2019</p>	<p style="text-align: center;">Attention</p> <p>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 Canada Ltd. 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 non-performance 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 this product, and to the structure of the building or its components. STO CANADA LTD. 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 Canada Ltd. website, www.stocorp.ca.</p>
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