

System Bulletin Building with conscience.

StoPowerwall® ExtraSeal®

Portland cement stucco directly applied to concrete masonry with a StoGuard water-resistive air barrier system and Sto high-performance finishes



Substrate: Code compliant concrete masonry wall construction		
1)	Sto ExtraSeal skim coat	
2)	Sto ExtraSeal scratch coat	
3)	StoPowerwall stucco or any Sto listed ASTM C926 compliant stucco brown coat	
4) & 5)	Sto Crack Defense (optional): Sto Mesh Reinforcement embedded in Sto Base Coat	
6)	Sto Primer (optional)	
7)	 Choose among: Sto Textured Finishes StoCast Finishes Sto Signature and Sto Speciatly Finishes 	

System Accessory: StoSeal STPE Sealant for use as an exterior weather seal around wall penetrations, at dynamic joints in wall construction, and as an interior air seal for air barrier continuity

System Description

StoPowerwall ExtraSeal is a stucco wall assembly for direct application to concrete or concrete masonry (CMU) walls. It features a code-compliant StoGuard water-resistive air barrier system. This wall assembly combines the strength and durability of traditional stucco with StoGuard air and water protection and Sto high performance finishes.

Uses

StoPowerwall ExtraSeal can be used in residential or commercial wall construction for superior aesthetics, durability, and air and moisture control.

Features	Benefits
Integrally colored factory blended textured finish, cast finish, or specialty finishes	Color and aesthetics offered with multiple finish looks increase curb appeal
Impact and puncture resistant	Withstands abuse, reduced maintenance
StoGuard water-resistive air barrier system	Fully compatible, code- compliant water-resistive air barrier system
Optional Sto Crack Defense	Resists stucco cracking
Properties	
Weight (stucco only)	< 7 psf (34.2 kg/m ²)
Stucco Assembly Thickness	Nominal ⁵ / ₈ inch (16 mm)
R-value (stucco only)	0.15 – 0.18 ft²•h•°F / Btu (0.026 – 0.031 m²•K / W)
Wind Load Resistance	Equivalent to CMU wall construction
StoGuard water-resistive air barrier system code compliance with StoGuard Detail Components	• IBC and IRC (2018) • ASHRAE 90.1-2019
Construction Types, Fire Resistance	 Suitable for types I – V construction ASTM E119 hourly-rated assemblies

10-year Limited Warranty when used with Sto Crack Defense

Maintenance

Requires periodic cleaning to maintain appearance, repair of cracks and impact damage if they occur, recoating to enhance appearance of weathered finish. Sealants and other façade components must be maintained to prevent water infiltration.



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Limitations

Fire resistance rated assemblies based on CMU base wall assembly rating

Wind load resistance: equivalent to wind load capacity of CMU wall construction

Cracking can occur in Portland cement stucco. Cracking is generally not caused by a material defect in the stucco and can be minimized by following sound design and construction practices such as the proper installation of lath, the proper incorporation of stress relief joints in the construction, proper sand gradation for field mixed stucco, proper proportioning of stucco mix ingredients, use of the minimum amount of water in the stucco mix for placement of stucco, avoiding the use of excess water, moist curing of the stucco after it has been applied, and proper sequencing of construction to avoid stresses in the freshly placed stucco.

Efflorescence is a normal occurrence in portland cement-based products and can affect final appearance of finish products installed over stucco.

For use on vertical above grade walls only. Do not use below grade or on roofs or roof-like surfaces.

Dark or highly saturated finish colors may require added maintenance compared to light or pastel colors.

Air Barrier and base coat materials are not intended for prolonged weather exposure. Refer to component product bulletins for specific limitations involving exposure, use, handling, and storage of component materials.

For application to concrete substrates verify bond to the prepared substrate, as specified by the design professional, at minimum 28-day age of stucco assembly. Where the substrate is too smooth, dense, or non-absorbent for adhesion, install appropriate metal lath plaster base as specified by the design professional.

Sustainable Design

Air Quality and VOC Compliance

All finish coatings, adhesives, air barrier joint treatments and coatings meet US EPA (40 CFR 59) and SCAQMD (Rule 1113) VOC standard for Building Envelope Coating: less than 50 g/L

LEED Credit Eligibility

- Energy and Atmosphere (EA)
- Materials and Resources (MR)
- Innovation in Design (IA)

Regulatory Compliance and Standards Testing				
ICC ESR 2323, IAPMO ER 382	StoPowerwall Stucco complies with 2015 and 2018 IBC and IRC			
ASTM E 2178 ¹	Sto ExtraSeal water-resistive air barrier complies with 2015 and 2018 IECC requirements as an air barrier material $(\leq 0.004 \text{ cfm/ft}^2 \text{ at } 0.3 \text{ inches water } [0.02 \text{ L/s} \bullet \text{m}^2] \text{ air permeability)}$ when used as directed			
ASTM E 514 ²	Sto ExtraSeal water-resistive air barrier resists water penetration for 4 hours			
ASHRAE 90.1-2019 ³	Air barrier complies with Building Envelope continuous air barrier requirements when used as directed			
ASTM E 119 ⁴	Meets requirements for hourly-rated assembly when installed over code compliant hourly-rated CMU base wall construction			

- 1. Standard Test Method for Air Permeance of Building Materials
- 2. Standard Test Method for Water Penetration and Leakage Through Masonry
- 3. Energy Standard for Buildings Except Low-Rise Residential Buildings
- 4. Standard Test Methods for Fire Test of Building Construction and Materials

Sto Corp. 3800 Camp Creek Parkway Building 1400, Suite 120	SB_6500 Revision: 004 Date: 05/2023	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
Atlanta, GA 30331 Tel: 404-346-3666 Toll Free: 1-800-221-2397 Fax: 404 346-3119		design professional, general contractor or builder. They should be installed in accordance with those specifications and \$to\$ instructions. \$to 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 \$to\$ control. Improper use of \$to 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. \$TO CORP. DISCLAIMS ALL WARRANTIES EXPRESS OR IMPLIED EXCEPT FOR EXPULIT LIMITED WRITTEN WARRANTIES ISSUED TO AND ACCEPTED BY BUILDING OWNERS IN ACCORDANCE WITH \$TO'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
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