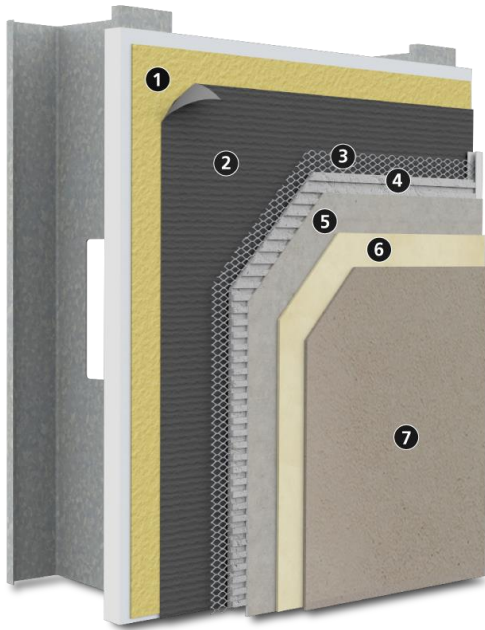


System Bulletin

StoPowerwall®

Portland cement stucco with StoGuard® air and water-resistive, drainage, and Sto high performance finishes



Substrate: Glass mat gypsum sheathing in compliance with ASTM C 1177, building code compliant wood-based sheathing (plywood or OSB), concrete, or concrete masonry (CMU) wall construction

1)	Air and Water-Resistive Barrier, choose among: <ul style="list-style-type: none"> Sto Gold Coat® Sto AirSeal® StoGuard® VaporSeal® Sto GoldSeal™ STPE StoShield™ SA VP StoShield™ SA NP
2)	WRB: code compliant paper or felt Water-Resistive Barrier
3)	Metal Plaster Base: code compliant minimum 2.5 lb/yd ² (1.4 kg/m ²) self-furred galvanized steel diamond mesh metal lath or Structalath SFCR Twin Track 2.5 self-furring welded wire lath
4), 5)	ASTM C926 compliant stucco scratch coat and brown coat (as manufactured or listed by Sto Corp.)
6)	Sto Primer (optional)
7)	Choose among: <ul style="list-style-type: none"> Sto Textured Finishes StoCast Finish: Wood or Brick Sto Signature Series or Sto Specialty 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 is a stucco wall assembly that features a code compliant air and water-resistive barrier and drainage. It combines the strength and durability of traditional stucco with Sto high performance finishes.

Uses

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

Features	Benefits
Integrally colored factory produced finishes	Consistent color and aesthetics increase curb appeal
Continuous air and water-resistive barrier	Protects against mold and moisture problems
Impact and puncture resistance	Withstands abuse, reduced maintenance
Optional Sto Crack Defense	Resists stucco cracking

Properties

Weight (excluding sheathing / studs)	< 12 psf (56.6 kg/m ²)
Assembly Thickness (from outer face of sheathing)	Nominal 7/8-inch (22mm)
R-value (from outer face of sheathing)	0.84 ft ² •h•°F / Btu (0.148 m ² •K / W)
Wind Load Resistance	+ 202 / - 144 psf ultimate loads achieved (+9.67 / - 6.89 kPa)
Compliance	<ul style="list-style-type: none"> 2018, 2021 IBC and IRC ASHRAE 90.1-2022
Construction Types, Fire Resistance	<ul style="list-style-type: none"> For use on noncombustible construction Hourly fire resistance rated assemblies

Warranty

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

Minimum stucco thickness: 3/4-in (19mm), maximum stucco thickness: 7/8-in (22 mm), applied in two coats, scratch and brown coat

Local codes or specifications may require a drainage space or cavity behind stucco. Refer to information on StoPowerwall Drainscreen for compliance.

Wind load resistance: . + 202 / - 144 psf (+9.66 / -6.89 kPa) ultimate loads achieved over steel studs with gypsum wallboard attached to interior. Consult ICC ESR-2323 and IAPMO 382 for other assemblies over steel and wood studs (assemblies have a safety factor of 3 applied). Ultimate wind load resistance depends on sheathing, sheathing attachment, lath attachment, and stiffness of supporting wall construction. Test any proposed assembly as needed and apply appropriate safety factor in accordance with local code requirements.

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: proper installation of lath, 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 on roofs or roof-like surfaces, on surfaces subject to in-service water immersion, or below grade. Maintain clearance of minimum 4-in (102mm) above earth grade and minimum 2-in (51mm) clearance above pavers or sidewalks.

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

Air and Water-Resistive 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.

Sustainable Design**Air Quality and VOC Compliance**

All finish coatings, adhesives, air and water-resistive barrier joint treatments and coatings meet US EPA (40 CFR 59) and SCAQMD (Rule 1113)

LEED Credit Eligibility

System has high potential for LEED and other sustainability program credits based on use of continuous air and water-resistive barrier and VOC compliance

Regulatory Compliance and Standards Testing

ASTM C926	StoPowerwall stucco and listed stuccos comply with ASTM C926 (as required by the IBC, IRC and most state codes)
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ICC ESR-1233	Sto air & water-resistive barriers Comply with 2018 and 2021 IBC, IRC and IECC
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ASHRAE 90.1-2022 ¹	StoPowerwall System complies with Section 5, Building Envelope, air barrier and continuous insulation requirements
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ASTM E2178 ² , ASTM 2357 ³	Sto Gold Coat AWRB meets material and assembly air leakage resistance criteria
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NFPA 285 ⁴ (not applicable)	StoPowerwall stucco is noncombustible and meets IBC criteria for use on noncombustible construction
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ASTM E 119 ⁵	StoPowerwall System maintains the fire-resistance rating of hourly rated load bearing and non-load bearing concrete, concrete masonry, steel frame and wood frame base wall assemblies
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1. Energy Standard for Buildings Except Low-Rise Residential Buildings

2. Standard Test Method for Air Permeance of Building Materials

3. Standard Test Method for Determining Air Leakage of Air Barrier Assemblies

4. Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Non-Load-Bearing Wall Assemblies Containing Combustible Components

5. Standard Test Methods for Fire Test of Building Construction and Material

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	SB - 6400 Revision: 008 Date: 05/2025	<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 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 this product, 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</p>
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