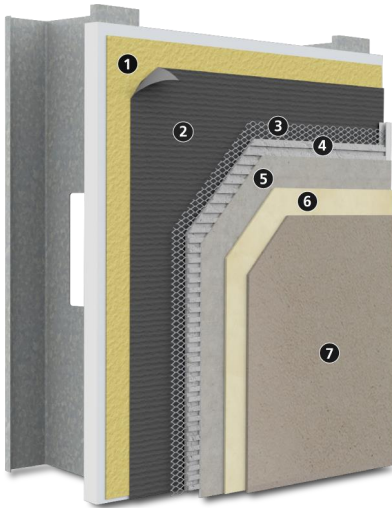


StoPowerwall®

Portland cement stucco with StoGuard® air and water-resistive barrier system, 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® |
| 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 Structuralath SFCR Twin Track 2.5 self-furring welded wire lath |
| 4) | ASTM C926 compliant stucco scratch coat (as manufactured or listed by Sto Corp.) |
| 5) | Stucco: ASTM C926 compliant stucco scratch and brown coat (as furnished 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 | + 65 psf, -48 psf (+3.11 kPa, -2.29 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. | |

System Bulletin

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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 these situations.

Wind load resistance: design for maximum allowable deflection of L/360. + 65 psf, -48 psf (+3.11 kPa, -2.29 kPa) design pressures achieved with safety factor of 3 when tested over 3-5/8-in (92mm), 18 ga studs at 16-in (406mm) oc with gypsum sheathing fastener spacing at 8-in (203mm) oc and lath fastener spacing at 7-in (178mm) oc, gypsum wallboard attached to interior. Also consult ICC ESR-2323 and IAPMO 382 for other assemblies over steel and wood studs that may apply. Ultimate wind load resistance depends on sheathing, sheathing attachment, lath attachment, and stiffness of supporting wall construction. Test assembly as needed with applicable safety factors to verify conformance 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) |
| ICC ESR-1233 | Sto air & water-resistive barriers Comply with 2018 and 2021 IBC, IRC and IECC |
| ASHRAE 90.1-2022 ¹ | StoPowerwall complies with Section 5, Building Envelope, air barrier and continuous insulation requirements |
| ASTM 2357 ² | Sto air and water-resistive barriers meet material and assembly air leakage resistance criteria |
| NFPA 285 ³ | StoPowerwall meets IBC criteria for use on noncombustible construction with up to 3-in (76mm) of insulation |
| ASTM E 119 ⁴ | StoPowerwall maintains the hourly rating of load bearing and non-load bearing concrete, concrete masonry, and wood or steel frame hourly rated base wall assemblies. |

1. Energy Standard for Buildings Except Low-Rise Residential Buildings
2. Standard Test Method for Determining Air Leakage of Air Barrier Assemblies
3. Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Non-Load-Bearing Wall Assemblies Containing Combustible Components
4. Standard Test Methods for Fire Test of Building Construction and Material

For complete information refer to www.stocorp.com

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SB - 6400

Revision: 008
Date: 03/2025

Attention

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