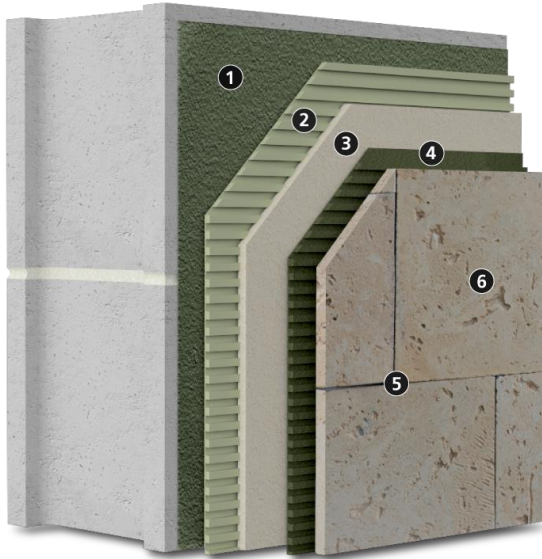


StoPowerwall® ExtraSeal® MVES

Masonry Veneer Engineered portland cement stucco wall system directly applied to CMU with a StoGuard air and water-resistive barrier system



Substrate: Code compliant concrete masonry wall construction

1)	Sto ExtraSeal Air and Water-Resistive Barrier
2)	Sto ExtraSeal scratch coat
3)	StoPowerwall Stucco or any Sto listed ASTM C926 compliant stucco brown coat
4)	Masonry Veneer Adhesive: StoColl Adhesive Mortar
5)	Masonry Veneer Grout: ANSI 118.7 compliant portland cement-based grout
6)	Masonry Veneer: thin brick, thin stone, ceramic tile, or manufactured stone in conformance with applicable building code requirements

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 MVES is a direct applied portland cement stucco wall system with Adhered Masonry Veneer (AMV) – thin brick, natural stone, ceramic tile, or manufactured stone. It features a StoGuard code compliant water-resistive air barrier system with the strength and durability of portland cement stucco and Sto high strength masonry veneer adhesive.

Uses

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

Features	Benefits
Variety of masonry veneers – brick, stone, tile – that integrate seamlessly with Sto finishes	Design versatility on a single compatible substrate
Impact and puncture resistant cladding	Withstands abuse, reduced maintenance
Fire resistant wall design	Occupant safety
StoGuard water-resistive air barrier system	Fully compatible code compliant system

Properties

Weight (stucco only)	< 7 psf (34.2 kg/m ²)
Assembly Thickness	Nominal 1-1/2 in (38mm) with 1/2 in (13mm) veneer
R-value (stucco only)	0.15 – 0.18 ft ² •h•°F / Btu (0.026 – 0.031 m ² •K / W)
Wind Load Resistance	Equivalent to CMU wall construction
Air Barrier Material Compliance	<ul style="list-style-type: none"> • IBC and IRC (2018) • ASHRAE 90.1-2016
Construction Types, Fire Resistance	<ul style="list-style-type: none"> • Suitable for types I – V construction • ASTM E119 hourly rated assemblies

Warranty

10-year Limited Warranty

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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Design Guidance and Limitations

Fire resistance rated assemblies: refer to IBC and IRC for fire-resistance rated stucco wall assemblies. Also refer to ICC-ESR 2323 and IAPMO UES Report 382. StoPowerwall ExtraSeal MVES does not detract from the hourly rating of listed assemblies.

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

Moisture Control: design and detail air and water-resistive barrier as a continuous assembly, incorporate flashing and coping to shed water and prevent water entry into wall construction, select compatible wall assembly components at material interfaces and to seal penetrations. For more information refer to Sto Detail Booklet, and Sto Tech Hotlines: TH-0403-BSc, *Critical Detail Checklist for Wall Assemblies*, and TH 0603-BSc, *Moisture Control Principles for Design and Construction of Wall Assemblies*.

For use on vertical above grade walls only, up to 6-stories or 72 ft (22m) in height, whichever is less, except for manufactured stone and natural stone. Refer to Sto Tech Hotline No. 0821-M, *Quick Reference Guide on Adhered Masonry Veneers in Exterior Wall Construction*, for additional information.

Not for use below grade, sloped or horizontal surfaces, or on roofs or roof-like surfaces. Refer to Sto Detail Booklet.

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.

Joints: provide expansion joints where they exist in the supporting wall construction, at control joints or cold joints in the supporting wall construction, at changes in support construction (e.g., masonry to frame wall), at junctures with dissimilar construction, at different substrates, at floor and ceiling lines in multi-story wall construction, at changes in building height and other areas of stress concentration, and within areas of not greater than 144 ft² (13.4m²) with length or height not more than 12 ft (3.6m) for ceramic tile, and not more than 18 ft (5.5m) for brick or stone, with length/height or height/length ratio not greater than 2-1/2 to 1. Dark colored veneer units may require closer spacing due to increased thermal movement. Consult with design professional. Do not bridge expansion joints, control joints, or cold joints in wall construction with adhered masonry veneer. Refer to Sto Detail Booklet.

Mortar Joints: must be grouted except where permitted for manufactured stone (refer to Sto Tech Hotline No. 0821-M, *Quick Reference Guide on Adhered Masonry Veneers in Exterior Wall Construction*)

Adhered masonry veneer units are limited in thickness, size and weight by the IBC and IRC. Refer to Sto Tech Hotline No. 0821-M, *Quick Reference Guide on Adhered Masonry Veneers in Exterior Wall Construction*.

Efflorescence is a normal occurrence in portland cement-based materials and can affect final appearance of finish products. To minimize risk of efflorescence follow best construction practices to prevent water entry into walls through proper design detailing, and the proper use of flashing, copings, and sealant. Refer to Sto Detail booklet.

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

Adhesive, air and water-resistive barrier joint treatments and coatings meet SCAQMD (Rule 1113) VOC standard for Building Envelope Coating: less than 50 g/L

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

ICC ESR 2323, IAPMO UES 382	StoPowerwall Stucco
ASTM E 2178 ¹	Sto ExtraSeal air and water-resistive barrier complies with 2015 and 2018 IECC requirements as an air barrier material (≤ 0.004 cfm/ft ² at 0.3 inches water [0.02 L/s•m ²] air permeability)
ASTM E 514 ²	Sto ExtraSeal air and water-resistive barrier resists water penetration for 4 hours
ASHRAE 90.1-2016 ³	Air barrier complies with Building Envelope Coatings, air barrier requirements
ASTM E 119 ⁴	Assembly meets requirements for hourly rated assembly when installed over code compliant hourly rated CMU 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 Tests of Building Construction and Materials*