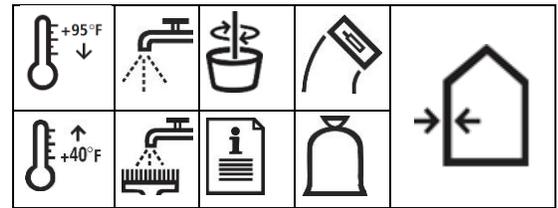


## PRODUCT BULLETIN

# StoColl

Product Number: 81789



### PRODUCT DESCRIPTION

StoColl is a polymer modified portland cement adhesive mortar for installing adhered masonry veneer (AMV) - thin brick, thin stone, ceramic tile, and manufactured stone. Use it in Sto proprietary Masonry Veneer Engineered Wall Systems (MVES) or over prepared vertical above grade concrete, concrete masonry (CMU), and stucco walls.

FEATURES	BENEFITS
Polymer-Modified	Excellent adhesion, freeze-thaw, and water resistance
One Component	Factory-controlled polymer-to-cement ratio; ready to use; easily mixed with water on the job-site, no chemical jugs to dispose
Compatible with thin brick, stone, tile, and manufactured stone	Design versatility; wide range of aesthetic choices
Optimal open time and pot life	Facilitates application
Complies with ANSI 118.4 and 118.15	Exceeds IBC bond strength requirements for adhered masonry veneer

**Packaging:** 50 lb. (22.7kg) bag

#### Coverage per Bag:

Approximately 40-50 ft<sup>2</sup> (3.72-4.65m<sup>2</sup>), applied with a 1/4 x 3/8 x 1/4 inch (6x10x6mm) square notched trowel

Approximately 17-30 ft<sup>2</sup> (1.58-2.79m<sup>2</sup>), applied with a 1/2x1/2x1/2 (13x13x13mm) square notched trowel

Coverage will vary depending on substrate condition, application technique, waste factor, final thickness, and other variables that may exist.

**Shelf Life:** 12 months in original, unopened, properly stored bag.

**Storage:** Store off the ground in a dry area, between 50 and 85°F (10 and 29°C) out of direct sun.

### SURFACE PREPARATION

Sto Proprietary Wall Systems: StoTherm® ci MVES, StoVentec® MVF, StoPowerwall®, StoPowerwall® DrainScreen®, and StoQuik® Silver systems. Refer to applicable Sto Specification.

Concrete, Concrete Masonry (CMU), and Portland Cement Stucco: must be constructed in conformance with applicable building code requirements. All surfaces must be structurally sound, clean, absorbent, slightly pitted or profiled, and free of frost, damage, and all bond-inhibiting materials, including dirt, dust, efflorescence, laitance, paint or other coatings, form oil and other foreign matter. Use appropriate repair methods for the substrate to repair pitting, spalls, cracks, peeling, blistering, delamination, weak surface conditions such as laitance, water damage, or other defects that may exist. In hot weather store material in a cool environment just prior to use and use cool or cold water for mixing. Thoroughly dampen CMU and absorbent concrete and stucco surfaces in hot, dry weather to reduce surface absorption just prior to installation of product. Work away from the sun or provide shade, and work during cooler periods of the day.

Product may be used to skim coat concrete, CMU, and stucco surfaces for the purpose of leveling/filling the surface up to 1/8 inch (3mm) thick; alternatively use Sto Leveler and Skim Coat for thicker applications to level up to 1/4 inch (6mm) in one coat or 1/2 inch (13mm) in two coats. Verify bond to properly prepared surfaces as specified by design professional at 28-day age of the assembly.

### MIXING

Mix ratio with water: 6-7 quarts (5.7-6.6L) potable water to one 50 lb. (22.7kg) bag of adhesive. Mix with a slow speed electric drill and paddle. Pour water into a clean mixing container. Mix while slowly adding the product to the water. Mix for approximately 2 minutes, allow to set for approximately 5 minutes, then re-mix for approximately 30 seconds to achieve a uniform, lump-free consistency. Avoid over mixing which could entrap air, do not re-temper, and do not exceed maximum amount of water in the mix ratio. Once mixed the pot life is approximately 60-90 minutes at 68°F (20°C) and open time is approximately 30 minutes. Pot life and open time diminish with hot, dry weather conditions, and open time diminishes with absorbent substrate conditions.

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### APPLICATION

IMPORTANT: AMV - thin brick, stone, tile, and manufactured stone must conform with applicable standards for exterior exposure in wet and freeze/thaw climate zones, applicable dimensional tolerances, and size and weight limitations of the applicable building code. Check to verify conformance before installation.

Apply only to structurally sound, clean, properly prepared, frost-free surfaces:

1. Mark layout lines in accordance with planning: generally taking into account pattern (e.g., running bond, stacked bond, etc.), size of grout joints, location of expansion joints and other start and stopping points of the installation, and aesthetics.
2. Use the proper size notched trowel for application:
  - Thin brick, thin stone, and ceramic tile units up to 5/8 inch (16mm) thick: ¼ x 3/8 x ¼ inch (6x10x6mm) square notched trowel.
  - AMV units up to 2-5/8 inch (67mm) thick: ½ x ½ x ½ inch (13x13x13mm) U-shaped or square notched trowel.
3. Spread the adhesive with the flat side of the trowel to “wet-out” the prepared substrate. Then use the notched side of the trowel to spread additional adhesive with ribbons of adhesive oriented horizontally or vertically. Apply in a small area and immediately install thin tile/brick/stone before a “skin” forms on the adhesive. If adhesive skins, remove and discard the skinned adhesive, and re-apply fresh adhesive.
4. Just prior to placing units “back-butter” the units by applying fresh adhesive onto the back of the units with the flat side of the trowel, or with a margin trowel:
  - Thin brick, thin stone, and ceramic tile units up to 5/8 inch (16mm) thick: scrape the adhesive onto the back surface in a thin layer so it “wets out” the surface.
  - Manufactured Stone units up to 2-5/8 inch (67mm) thick: clean and dampen the back surface with a wet sponge, then apply a nominal ½ inch (13mm) layer of adhesive onto the back surface with the flat side of the trowel.
5. Immediately place units slightly offset from their final position in the freshly applied wall adhesive, then slide into place while applying firm pressure to fully bed the units in the adhesive so no voids exist in the adhesive. Use a straight edge to check for evenness of the surface when installing thin brick/stone/tile.
6. As units are placed, periodically remove a unit to verify full contact of adhesive with the substrate and the back of the unit, and full embedment (no voids) in the adhesive.
7. Before the adhesive dries scrape out any excess mortar in the grout joints or on the surface of the units. Allow to cure for at least 24 hours before grouting/pointing. Allow additional drying time during cool and/or humid weather conditions to ensure adequate bond and to minimize the risk of efflorescence.

### Grouting/Pointing

Use an ANSI 118.7 compliant grout or pointing mortar in conformance with the manufacturer’s instructions.

### Curing/Drying

Final drying depends on temperature, wind, and humidity conditions. Hot, dry, windy conditions accelerate drying and cure time. Cool, damp conditions retard drying and cure time. Protect from rain infiltration and freezing conditions to avoid disruption of adhesive bond and to minimize risk of efflorescence.

### Clean Up

Clean tools and equipment with water immediately after use. Cured material can only be removed mechanically.

### LIMITATIONS

- Use only when surface and ambient temperatures are between 40 and 95°F (4 and 35°C) during application and drying period.
- Rapid loss of moisture during drying period due to direct sun, wind, and high temperatures can cause low strength development in portland cement-based materials. Adjust scheduling of work to avoid these conditions.
- Use of excess water can cause low strength development in portland cement-based materials. Do not exceed recommended amount of mix water.
- Do not use on surfaces with standing or glistening water.
- Do not use below grade or on roofs or roof-like surfaces.
- Do not use on wood or metal substrates or directly apply to air barrier, waterproofing, or flashing materials (unless specified by Sto).
- Not for use as part of a StoPowerwall ci or StoTherm ci Mineral assembly.
- Field testing is recommended to verify adequacy of surface preparation and adhesion. For application areas larger than 100 ft<sup>2</sup> (9.29 m<sup>2</sup>) consult a qualified design professional to establish appropriate intervals for field testing.

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### LIMITED WARRANTY

This product is subject to a written limited warranty which can be obtained free of charge from Sto Corp.

#### HEALTH & SAFETY

**WARNING:** Causes eye and skin irritation.

**Precautionary Statement:** Wash hands thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.

**FIRST AID MEASURES:** Eye Contact: Immediately flush eyes with plenty of water for at least 15 to 20 minutes. Ensure adequate flushing of the eyes by separating the eyelids with fingers. Get immediate medical attention.

**Skin Contact:** Immediately wash skin with plenty of soap and water for 15 to 20 minutes, while removing contaminated clothing and shoes. Get medical attention if irritation develops or persists.

**Inhalation:** If inhaled, remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention.

**Ingestion:** If swallowed, do NOT induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person. Store locked up.

**Spills:** Collect with suitable absorbent material such as cotton rags.

**Disposal:** Dispose of in accordance with local, state or federal regulations.

**Warning:** KEEP CONTAINER CLOSED WHEN NOT IN USE. KEEP OUT OF THE REACH OF CHILDREN. NOT FOR INTERNAL CONSUMPTION. FOR INDUSTRIAL USE ONLY. Consult the Safety Data Sheet (SDS) on [www.stocorp.com](http://www.stocorp.com) for further health and safety information.

### TECHNICAL DATA

REPORT	TEST METHOD	TEST CRITERIA	TEST RESULT*
Shear Bond Strength – dry, wet, and after freeze/thaw cycling	ANSI 118.4 and ANSI 118.15	Meet minimum strength requirements	Meets shear bond strength requirements for all tile types in dry state, after water immersion, and after freeze/thaw cycling
Radiant Heat Ignition	NFPA 268	No ignition during 20-minute test period	No ignition
Multistory Flame Spread	NFPA 285	Complies with NFPA 285 Acceptance Criteria	Pass (qualifies for use on noncombustible construction in StoTherm® ci MVES and StoVentec® MVF exterior insulated wall systems)
Fire Resistance	ASTM E119	Hourly rating	Meets 1-hour fire resistance rating as a component of StoTherm ci MVES load bearing or non-load bearing steel frame wall assembly
Building Code Compliance	Meets IBC requirements for use on noncombustible construction as a component of: StoTherm® ci MVES, StoVentec® MVF (refer to Intertek Design Listing Sto/CWP 30-01), StoPowerwall®, StoPowerwall® DrainScreen®, and StoQuik® Silver systems.		
	Meets IBC requirements, Section 2103.2.4, "Mortar for adhered masonry veneer"		

\* Results are based on lab testing under controlled conditions. Results can vary between labs or from field tests.

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#### ATTENTION

This product is 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. It 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 this product 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 EXPRESSED 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](http://www.stocorp.com)