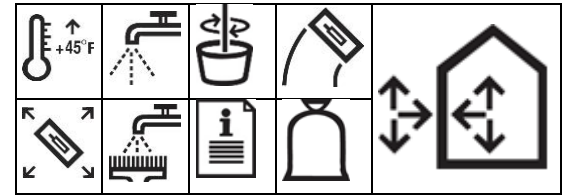


## PRODUCT BULLETIN

# Sto Full-Depth Plus

Product Number: 80311



### PRODUCT DESCRIPTION

Sto Full-Depth Plus, with integral corrosion inhibitor, is a single-component cement-based repair material for structurally repairing or overlaying deteriorated concrete. The product can be used for horizontal or vertical/overhead form & pump and form & pour applications.

FEATURES	BENEFITS
Very Low Shrinkage	Stable bond line; resists perimeter cracking
Freeze/Thaw Durability	Suitable for any climate
Thermally Compatible with Concrete	Prevents delamination caused by temperature changes
Contains an integral corrosion inhibitor	Strengthens passive layer on reinforcing steel, protecting from corrosion
One Component	Ready to use; pumpable; easily mixed with water on the jobsite; no chemical jugs to dispose
Pre-Extended	Ensures quality aggregate. Pre-measured extension increases job productivity

**Packaging:** 65 lbs. bag (29.5kg)

**Yield:** 0.51 ft<sup>3</sup> (0.014 m<sup>3</sup>) per 65 lbs. bag (29.5kg)

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

**Storage:** Store in a dry area, between 50°F (10°C) and 85°F (29°C). Protect from direct sunlight, extreme heat [90°F (32°C)].

### SURFACE PREPARATION

1. Saw cut the perimeter of the repair area to a minimum depth of 1" (25mm) at a 90° angle.
2. Remove loose, deteriorated concrete and all other bond-inhibiting materials from the area to be repaired.
3. Prepare concrete surface using proper equipment to achieve a Concrete Surface Profile (CSP) of 5 or greater according to ICRI Guideline No. 310.2R-2013. Verify bond to properly prepared concrete or concrete masonry as specified by design professional at a minimum of 28 days old.
4. Concrete substrate must be clean and saturated surface dry (SSD) with no visible standing water. Exposed reinforcing steel shall be clean and free of oxidation (rust).
5. Work a scrub coat of the mixed material into the substrate to ensure intimate contact and establish bond. Complete repair while scrub coat is still wet.

**Priming:** Alternatively, prepared concrete and reinforcing steel may be primed using Sto Bonding and Anti-Corrosion Agent.

### MIXING

Use Sto Full-Depth Plus at a preconditioned temperature of 70 ± 5°F (21 ± 3°C). Use 5.3 to 5.8 pints (2.51 to 2.74 L) of water per 65 lbs. (29.5kg) bag.

#### Mixing 1 bag:

**Recommended Mixing Paddle:** Type P2, P5, or P6 according to ICRI Guideline No. 320.5R-2014

**Recommended Mixing Drill:** Type D5 or D6 according to ICRI Guideline No. 320.5R-2014

#### Mixing multiple bags:

**Recommended Mortar Mixer:** Type A, B, or G according to ICRI Guideline No. 320.5R-2014 (IMPORTANT: Pre-dampen mixer)

Pour water (5.3 pints (2.51 L) per bag) into a clean mixing container. Mix while slowly adding the product to the water. If more water is needed, up to one-half pint (0.24 L) per bag may be added. Mix up to 3 minutes, to a uniform, lump-free consistency. Avoid over mixing which could entrap air. Once mixed, the working time is 20-40 minutes, depending upon material, ambient and surface conditions. Mix thoroughly to a uniform consistency.

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### APPLICATION

#### Patching and Overlay

Dampen the area to be repaired so that the pores of the concrete are filled with water. Remove any ponding or glistening water on the surface (saturated surface dry/SSD). Work a scrub coat of the mixed material into the substrate to ensure intimate contact and establish bond. Apply Sto Full-Depth Plus while the scrub coat is still wet. Consolidate and trowel to the desired finish.

#### Form-and-Pour or Pump

Sto Full-Depth Plus can be placed via form and pour or pump for horizontal, vertical or overhead applications. Formwork shall be rigid, watertight and have drainage ports for pre-soaking repair area. 24 hours prior to repair placement, fill formwork with potable water to create an SSD surface (NOTE: pre-soaking not required if using Sto Bonding and Anti-Corrosion Agent). Drain water from formwork. Pour or pump Sto Full-Depth Plus into the formed repair area. Consolidate repair material using an internal concrete vibrator or external form vibrator.

### Curing/Drying

Direct sun or wind may cause unwanted rapid surface drying. Curing may be accomplished by continuous water fogging for 48 hours or cover with damp burlap or burlene curing blankets. Do not use solvent-based curing compounds or allow water to puddle. If a coating or sealer will be applied, use water fogging or blanket curing methods and prep finished surface per coating manufacturer's recommendations.

### Clean Up

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

### 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 in an appropriate container. Uncured material may be removed with water.

**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.

### LIMITATIONS

- Apply only when the surface and ambient temperatures are 45°F (7 °C) and rising. See Cold Weather Application guidelines, as per ACI for applications in temperatures less than 50°F (10°C). Applications made during temperatures greater than 85°F (29°C) should follow Hot Weather Application guidelines, as per ACI.
- Cold or damp conditions retard hydration and require additional time before coating or opening to traffic.
- The minimum required thickness is 1 inch (25 mm).
- Do not feather edge.
- Do not add more water than specified
- Do not add additional powder from other units.
- Do not overmix.

### LIMITED WARRANTY

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

**PRODUCT BULLETIN**

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**TECHNICAL DATA**

REPORT	TEST METHOD	TEST CRITERIA	TEST RESULT*
Application Thickness	-----	Minimum Maximum	1" or 25mm Full Depth
Working Time (minutes)	-----	-----	20 - 40
Set Time (minutes)	ASTM C403	Initial Final	40-60 75-110
Compressive Strength (psi)	ASTM C39	1 day 7 days 28 days	>2,800 >6,000 >7,000
Flexural Strength (psi)	ASTM C78	7 days 28 days	>700 >900
Modulus of Elasticity (psi)	ASTM C469	28 days	5.38 x 10 <sup>6</sup>
Splitting Tensile Strength (psi)	ASTM C496	7 days 28 days	>400 >460
Shrinkage (%)	ASTM C157 modified	28 days	<0.032
Direct Tensile Bond (psi)	ASTM C1583	28 days	>400 (substrate failure)
Slant Shear Bond (psi)	ASTM C882 modified	7 days 28 days	>2,000 >2,800
Freeze/Thaw Resistance (%)	ASTM C666	300 cycles	>99
Salt Scaling Resistance	ASTM C672	50 cycles	Rating = 0 Scaled Material = 0.0 lbs/ft <sup>2</sup>

Note: To convert psi to Mega Pascal (MPa) multiply by 0.0069.

**Sto Corp.**

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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)