

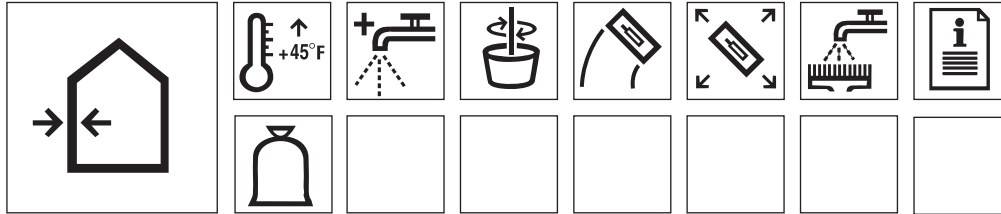
Sto Full-Depth Repair Mortar - CI

CR311CI

Division 3

1. patching and repair mortar
2. form, horizontal and pump
3. form and pour
4. flowable/pumpable

cement-based, using proprietary StoCrete technology



Technical Data

REPORT	TEST METHOD	TEST AGE	TEST RESULTS NEAT MORTAR	TEST RESULTS EXTENDED MORTAR
Compressive Strength (psi)	ASTM C-109	1 day	3,500	
		7 days	5,500	
		28 days	7,000	
Compressive Strength (psi)	ASTM C-39	1 day		3,200
		7 days		4,800
		28 days		6,000
Flexural Strength (psi)	ASTM C-293	1 day	NT	NT
		7 days	1,100	700
		28 days	1,150	750
Splitting Tensile Strength (psi)	ASTM C-496	7 days		425
		28 days		600
Modulus of Elasticity (psi)	ASTM C-469	28 days	3.7 million psi	3.9 million psi
Length Change	ASTM C-157	28 days	<0.065%	<0.030%
Direct Tensile Bond (psi)	ASTM D-4541	28 days	260	210

*Typical values for material cured at 73° F (23° C) and 50% R.H.
Note: To convert psi to megapascal (Mpa) multiply by 0.0069.

Sto Full-Depth Repair Mortar with integral corrosion inhibitor is a single-component cement-based mortar for structurally repairing or overlaying deteriorated concrete. Use on horizontal surfaces for repairs from 1/2 to 4 inches (12 to 102 mm) or extend it with aggregate for deeper applications. Its formula provides increased strength gain and improved performance for repair applications.

Yield

.40 ft³ per 50 lb bag (0.0125 m³ per 23 kg bag)

Packaging

50 lb bag (23 kg bag)

Shelf Life

12 months in original, unopened container.

Storage

Store in a dry area, between 50° F (10° C) and 85° F (29° C). Protect from direct sunlight and extreme heat.

Features

Benefits

- | | |
|---|--|
| 1 Low shrinkage | Stable bond line; resists perimeter cracking |
| 2 Thermally compatible with concrete | Prevents delamination caused by temperature changes |
| 3 High abrasion resistance | Stands up to abusive traffic |
| 4 One-component | Ready-to-use; pumpable; easily mixed with water on job-site; no chemical jugs to dispose |
| 5 Early recoat | Coatings may be applied 72 hours after application |

Surface Preparation

PATCHING

Remove loose and deteriorated concrete by mechanical chipping or sand-blasting to obtain a fractured aggregate surface. Detail the edge of the patch to a 90° angle to eliminate feather edging. Make sure surfaces are sound, clean and free of all bond-inhibiting material including oil, dust, dirt, laitance and standing water.

OVERLAY

Remove loose and deteriorated concrete with a scabbler or by shot-blasting to obtain a fractured aggregate surface. Detail the edge of the overlay to a 90° angle to eliminate feather edging. Make sure surfaces are sound, clean and free of all bond-inhibiting material including oil, dust, dirt, laitance and standing water.

Mixing

Use Sto Full-Depth Repair Mortar with integral Corrosion Inhibitor at a preconditioned temperature of 70 ± 5° F (21 ± 3° C).

Using Drill and Paddle: Mixing must be achieved mechanically using a slow-speed ¾-inch (9 mm) drill and mixing paddle. Pour 5-6 pints (2.37-2.83 L) of water into a clean 5-gallon (19 L) mixing bucket. Mix while slowly adding the powder, one-third at a time. If more water is needed, up to one-half pint (.24 L) may be added. Mix up to 3 minutes, to a uniform, lump-free consistency. Avoid overmixing which could entrap air.

Mortar Mixer: Predampen thoroughly the inside of a clean mortar mixer, then remove any excess water. Pour 5.0-6.0 pints (2.37-2.83 L) of water per bag into the mortar mixer and slowly add all of the powder. If more water is needed, up to one-half pint (.24 L) per bag may be added.

Mix up to 4 minutes, to a uniform, lump-free consistency. Avoid overmixing which could entrap air. Once mixed the working time is 20-40 minutes depending upon material, ambient and surface conditions.

Application

PATCHING

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 Repair Mortar w/CI while the scrub coat is still wet. Consolidate it and trowel to desired finish.

NOTE: For application depths greater than 4 inches (102 mm), extend Sto Full-Depth Repair Mortar w/CI by adding 27 pounds (12 kg) of clean, uniformly graded ¾-inch (9 mm) aggregate dampened to SSD condition. Consolidate it and trowel to the desired finish. Applications made during temperatures below 50° F (10° C) and above 80° F (27° C) should follow appropriate application guidelines.

OVERLAY

Follow application instructions for PATCHING.

Curing

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 manufacturer's recommendations.

Clean Up

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

Limitations

- Apply only when the surface and ambient temperatures are 45-50° F (7-10° 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 ½ inch (12 mm).
- Do not feather edge.
- Do not add more water than specified.
- Do not add additional powder from other units.
- Do not overmix.

How It's Used

Sto Full-Depth Repair Mortar with Corrosion Inhibitor is a one-component mortar that is ready to use; just add clean water. Once mixed by drill paddle or standard mortar mixer, its medium slump floats and consolidates easily. Use Sto Full-Depth Repair Mortar with Corrosion Inhibitor for repairs from 1/2 to 4 inches (12 to 102 mm) or extend it with aggregate for deeper applications.

Health And Safety

Health Precautions

Contains Portland cement and silica. Avoid breathing dust. As with any chemical construction product, exercise care when handling.

Safety Precautions

Use adequate ventilation. Use of NIOSH/MSA-approved dust respirator, safety goggles and protective gloves are recommended.

First Aid

SKIN CONTACT: Wash thoroughly with soap and water.

EYE CONTACT: Flush immediately with water for 10-15 minutes and contact a physician.

RESPIRATORY PROBLEMS: Remove affected person to fresh air immediately and contact a physician.

HYGIENE: Wash hands immediately after use. Wash clothing before reuse.

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 CONTAINERS CLOSED WHEN NOT IN USE. KEEP OUT OF THE REACH OF CHILDREN. NOT FOR INTERNAL CONSUMPTION. FOR INDUSTRIAL USE ONLY. Consult the Material Safety Data Sheet for further health and safety information.

LIMITED WARRANTY

THIS PRODUCT IS SUBJECT TO A WRITTEN LIMITED WARRANTY WHICH CAN BE OBTAINED FREE OF CHARGE FROM: Sto Corp., 3800 Camp Creek Parkway, Building 1400, Suite 120, Atlanta, GA 30331; Tel: 404-346-3666; Fax: 404-346-3119

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