

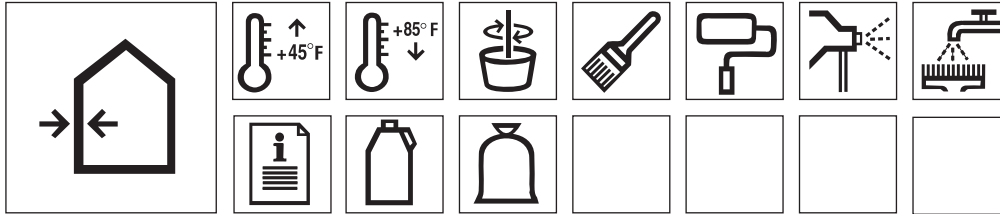
Sto Bonding and Anti-Corrosion Agent

CR246

Division 3

bonding agent
anti-corrosive
microsilica-enhanced

epoxy-, acrylic-based, using proprietary StoCrete technology



Technical Data

REPORT	TEST METHOD	CRITERIA	TEST RESULTS
Pot Life (minutes)			90
Open Time (hours)			24
Bond Strength (psi)	ASTM C-882	2 hrs. open	1,800
	Plastic to hardened concrete	8 hrs. open	2,100
		16 hrs. open	2,100
		24 hrs. open	2,100
Tensile Strength (psi)	ASTM C-190	28 days	800
Flexural Strength (psi)	ASTM C-78	28 days	2,000
Rapid Chloride Permeability (Coulombs)	AASHTO T-277 ASTM C-1202	28 days	< 150

*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.

Features	Benefits
1 24-hour open time	Provides work schedule flexibility; can be used with formed or shotcrete repairs
2 Epoxy-, acrylic-based	Ensures bond to concrete and steel
3 Microsilica-enhanced	Increases bond strength; screens out chloride ions, protecting steel against corrosion
4 Non-vapor barrier	Allows concrete to breathe naturally; can be applied to on-grade concrete
5 Two components	Simple to use; mixing instructions easily understood
6 Sprayable	Easy to apply; speeds application time
7 20 mils as a bonding agent	Increases coverage; saves money
8 Field batched	No waste; mix only the amount needed
9 Water clean up	Tools can be reused; no hazardous solvents needed; environmentally friendly
10 Low odor	Use indoors with minimal ventilation; VOC compliant
11 Non-flammable	Safe for workers

Sto Bonding and Anti-Corrosion Agent is a unique combination of portland cement, microsilica, epoxy, and acrylic resin. Use it for bonding new concrete or mortar to old and for protecting reinforcing steel against rust and corrosion. When used as a bonding agent, it provides up to a 24-hour open time.

Volume Yield
2.5 gal per unit (9.5 L)

Coverage
Bonding Agent: 70-80 ft² per gal, applied at 20 wet mils (6-7 m² per 3.8 L, at 20 wet mils).

Anti-Corrosion Agent: 70-80 ft² per gal, applied at 20 wet mils (6-7 m² per 3.8 L, at 20 wet mils)

Packaging
Component A: 1 gal jug (3.8 L)
Component B: 28 lb. bag (13 kg)

Shelf Life
12 months in original unopened, 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)] and freezing.



Surface Preparation

BONDING AGENT

Remove loose and deteriorated materials by shot- or sand-blasting, or mechanical means to obtain a fractured aggregate surface. Make sure surfaces are sound, clean, and free of all bond-inhibiting materials including oil, dust, dirt, laitance and standing water.

ANTI-CORROSION AGENT

Remove rust or active corrosion using sand-blasting or mechanical wire brushing to produce a white metal finish. Make sure surfaces are clean, dry and free of all bond-inhibiting materials including oil, dust and dirt. Sto Bonding and Anti-Corrosion Agent must be applied immediately after cleaning of reinforcing steel to avoid new corrosion on reinforced steel.

Mixing

Use both components at a preconditioned temperature of $70 \pm 5^\circ \text{F}$ ($21 \pm 3^\circ \text{C}$). Use 1 gallon (3.8 L) jug of Component A per 28-pound (13 kg) bag of Component B. Alternatively, batch mix in 1/4 units.

Mixing must be achieved mechanically using a slow-speed 3/4-inch (19 mm) drill and mixing paddle. Shake jug containing Component A. Pour all of liquid Component A into a clean, dry 5-gallon (19 L) mixing bucket. Mix while slowly adding the Component B powder, one third at a time.

Continue mixing until all of the powder has been added. Mix thoroughly until Components A and B are evenly blended to a uniform color. Never add water to the mixture. Mix only sufficient material that can be used within its 90 minute pot life.

Application

Apply only to sound and clean, dry, properly prepared, frost-free surfaces.

BONDING AGENT

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).

Apply in one 20 mil (0.5 mm) coat with a hopper gun, pattern pistol-type spray equipment, or with a stiff-bristle brush. (Contact Sto representative.) Place fresh mortar or concrete while the Sto Bonding and Anti-Corrosion Agent is still wet or within 24 hours.

As a bonding agent only, one 20 mil coat is required.

ANTI-CORROSION AGENT

Brush on two 10 mil (0.25 mm) coats allowing 30-45 minutes between coats. Place fresh mortar or concrete after the Sto Bonding and Anti-Corrosion Agent has dried to the touch or within 24 hours. The two coats must be a minimum of 20 mils (0.5 mm).

Clean Up

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

Limitations

- Apply only when surface and ambient temperatures are 45°F (7°C) and rising. Consult Sto representative when applications will be made during temperatures below 45°F (7°C) or above 90°F (32°C).
- Mix Component A and Component B only in the specified ratios. Never add water to the mixture.
- **NOTE: Sto Bonding and Anti-Corrosion Agent dries in approximately 2 hours. Repair mortar/concrete must have sufficient flowability to "wet-out" the substrate in order to assure proper bonding of repair material.**

How It's Used

Sto Bonding and Anti-Corrosion Agent provides an easier way to bond cement-based materials and to protect reinforcing steel against corrosion. Its two components are field batched. Mixed by drill and paddle, its creamy consistency can be sprayed on easily, increasing job-site productivity. Its unique curing characteristics allow fresh concrete or mortar to be placed for up to 24 hours.

Health And Safety

Health Precautions

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

Safety Precautions

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

First Aid

SKIN CONTACT: Wash hands 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 CONTAINER 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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