



CRACK-RESISTANT SURFACE BONDING CEMENT

Portland cement-based vertical concrete mix for multiple uses

1. PRODUCT NAME

Akona® Crack-Resistant Surface Bonding Cement

2. MANUFACTURER

TCC Materials®
2025 Centre Pointe Blvd.
Mendota Heights, MN 55120 USA
Phone: 1.651.688.9116
Web: tccmaterials.com

3. PRODUCT DESCRIPTION

Akona Crack-Resistant Surface Bonding Cement is a specially-formulated, multi-use product. It can be used to build and restore retaining walls or block walls, patch large vertical holes where non-sagging cement is a must, or repair deteriorated stucco. Because it contains special fibers it will not shrink, crack, or sag on a vertical repair. Provides additional overall strength vs. conventional concrete. Mix with water or for additional strength and adhesion, mix with Akona Concrete Bonding Additive (sold separately).

Features and Benefits

- Superior bond
- Polymer-modified
- Trowelable to feather edge
- Excellent durability, interior or exterior
- Just add water, mix, and use

When/Where to Use

- Moisture resistant
- Glass fiber reinforced for durability
- High strength
- Controls shrinkage, cracking, and sagging on vertical repairs
- Just mix with water or a bonding additive and use

4. TECHNICAL DATA

Greater than: > Greater than or equal to: ≥ Less than: < Less than or equal to: ≤

Typical Values • Akona Crack-Resistant Surface Bonding Cement	
Time of Setting (ASTM C191)	
Initial Set	2 hours
Final Set	4 hours
Liquid Requirement	1-1½ gal. (3.8-5.7 L) per 50 lb. (22.7 kg)
Flexural Strength ASTM C887	
1 day	≥ 450 psi (3.1 MPa)
28 days	≥ 800 psi (5.5 MPa)
Compressive Strength ASTM C887 (air dry)	
1 day	> 1,600 psi (11 MPa)
28 days	> 3,500 psi (24.1 MPa)

Available Sizes

- 50 lb. (22.7 kg) bag (BOM #102614)

Coverage

Each 50 lb. (22.7 kg) bag covers approximately 50 sq. ft. at ½ in. (3 mm) thickness

5. INSTALLATION

Preparation

Read all directions before starting work. Proper surface preparation is crucial to achieving a successful application.

1. Remove all loose or unsound materials. Thoroughly clean surface of dirt, dust, grease, paint, or other contaminants before patching, topping, or placing overlays.
2. Apply only to surfaces that are frost-free and above 40°F (4°C) and below 100°F (38°C) within 24 hours of application and 72 hours thereafter and when rain is not predicted to fall on the surface for 24 hours after application.
3. Just prior to application, pre-dampen surface to be repaired with clean water to saturated surface dry (SSD) condition with no standing water remaining.

Note: It is the responsibility of the installer/applicator to ensure the suitability of the product for its intended use.

Mixing

1. Use cool, potable water, clean tools and clean containers. Always stir the powder into the liquid. Mix complete contents of the bag in a wheel-barrow, bucket, mortar box, or mechanical mixer.
2. Begin with approximately 1 gal. (3.8 L) of clean, cool water per bag.
3. Mix product thoroughly to achieve a stiff, lump-free, putty-like consistency, approximately 2-3 minutes. Avoid high speed mechanical mixing which can entrap air into the mixture. If the product becomes firm before application, re-mix to proper consistency. If required, add additional water sparingly, up to a total of 1½ gal. (5.7 L) liquid per 50 lb. (22.7 kg) powder.
4. **Optional:** For improved durability, strength, and adhesion when applying over previously coated and non-porous surfaces it is recommended to use Akona Concrete Bonding Additive in place of water (sold separately). Concrete Bonding Additive may be diluted by up to ⅓ with water, however, for extra difficult restoration or waterproofing projects, it is recommended to be used at full strength.
5. Warmer temperatures will reduce the working time. The addition of cold water at high temperatures, or warm water in low temperatures will aid in adjusting the mix temperature.

Application

- Dampen the wall surface prior to applying product with a water spray. If the wall becomes dry before application of product, re-wet the wall. The dampened walls are important in establishing a strong bond.
- This product should be applied between ⅛ in. (3 mm) up to ½ in. (13 mm) thickness. When multiple lifts or layers are required, apply next layer once product is firm, but not reached final set (approximately 2-4 hours) between lifts. Make sure to dampen the surface area between applications of product.
- When troweling, be sure to clean the surface of the trowel often with water and use a "light touch" when finishing the surface. Do not over trowel. Protect the surface from use until surface is completely hard and set. Clean up with soap and warm water as soon as application is completed.

Patching or Filling Holes in Concrete/Masonry Walls & Stucco Repair:

- Crack-Resistant Surface Bonding Cement is ideally suited for patching or filling holes in concrete or masonry walls, as well as, repairing cracks or filling openings in stucco walls.

Bonding Dry-Stack Segmental Retaining Walls & Masonry Walls:

- **Footings or Foundations:** The secret to sound structure is a strong, level foundation. A level and properly aligned footing makes stacking and troweling much easier. Footings must be built below the frost line and should be a minimum of twice the thickness of the blocks used. Consult your local masonry supplier for information about footings and slab construction.
- **Dry-stacking Masonry Units:** Lay the first course of masonry units in a full bed of Crack-Resistant Surface Bonding Cement. Make sure this course is straight and level. Dry-stack masonry units in a staggered or running bond pattern for strength. As you place masonry units in position, slide it against the masonry units below to smooth out any roughness. Crack-Resistant Surface Bonding Cement can be used between masonry units to maintain a level and properly aligned wall. The better you are in maintaining a level and aligned wall, the stronger and more attractive your finished wall will be. Dry-stack the rest of the wall before applying the Crack-Resistant Surface Bonding Cement to both sides of the wall. Apply product with a trowel in upward strokes, maintaining a uniform thickness of at least 1/8 in. (3 mm). Do not over-trowel.

Curing

Like other cement based materials, Crack-Resistant Surface Bonding Cement gets most of its strength within 24 hours after application. It is imperative to keep the new surface area damp for at least 2 days. Wetting the walls once or twice daily with a fine mist will ensure proper curing for strength. Hot, windy or dry conditions may require more frequent wetting. Wet curing may be minimized when using Concrete Bonding Additive. Finished surface can be painted with most paints once cured for a minimum of 7 days and area remains dry.

Clean Up

Use soapy water to clean hands and tools immediately after use. Dried material must be mechanically removed. Use a waste water hardener (e.g. Congelz® or similar product) for cementitious waste disposal.

Limitations

- Follow all industry standard safety procedures when handling, such as gloves and eye protection. Wear gloves at all times, failure to do so can result in severe burns.
- Mix with clean potable water or a liquid bonding additive.
- Do not use more than the recommended amount of liquid. Overwatering may cause excessive shrinkage, cracking, reduce adhesion, and long term durability.
- When applying over previously coated and non-porous surfaces it is recommended to use a dilution of 2 parts Akona Concrete Bonding Additive and to 1 part water. For extra difficult restoration and waterproofing projects, Akona Concrete Bonding Additive is recommended to be used full strength in place of water.
- Apply between 1/8 in. (3 mm) up to 1/2 in. (13 mm) thickness.
- When additional layers are needed to build-up product, apply second coat after initial set of first coat, while product is still partially damp and plastic (approximately 2-4 hours) and dampen the surface area between applications.
- Temperature and humidity may cause the set time to vary slightly. Cooler weather will slightly retard set time – hot weather will slightly accelerate set time.
- Do not apply over concrete cured less than 7 days, or is frozen or contains frost.

Safety

READ THE SAFETY DATA SHEET (SDS) BEFORE USING THIS PRODUCT. SDS information is available on our website: tccmaterials.com

Cautions

Read complete cautionary information printed on product container prior to use.

This Product Data Sheet has been prepared in good faith on the basis of information available at the time of publication. It is intended to provide users with information about and guidelines for the proper use and application of the covered Akona brand product(s) under normal environmental and working conditions. Because each project is different, TCC Materials cannot be responsible for the consequences of variations in such conditions, or for unforeseen conditions.

6. AVAILABILITY

To locate Akona products in your area, please contact:

Phone: 1.651.688.9116

Email: info@tccmaterials.com

7. WARRANTY

Seller warrants that its product will conform to and perform in accordance with the product specifications. The foregoing warranty is in lieu of all other warranties, expressed or implied, including, but not limited to those concerning merchantability and fitness for a particular purpose. Because of the difficulty in ascertaining and measuring damages hereunder, it is agreed that Seller's liability to the Buyer shall not exceed the total amount billed and billable to the Buyer for the product hereunder.



Shelf Life	Best when used within one year in original, unopened bags
Storage Conditions	Store dry, cool, out of direct sunlight. Best to condition material to 50-80°F (10°-27°C) before using.
Color	Gray

WARNING: INJURIOUS TO EYES

KEEP OUT OF REACH OF CHILDREN

©Copyright 2020 TCC Materials®



2025 Centre Pointe Blvd
Mendota Heights, MN 55120

REV 08/23