



NON-SHRINK GROUT

High-strength, easy to use, non-shrink grout

1. PRODUCT NAME

Akona® Non-Shrink Grout

2. MANUFACTURER

Bluestone Products™, a TCC Materials® company
 2025 Centre Pointe Blvd., Suite 300
 Mendota Heights, MN 55120 USA
 Phone: 1.651.688.9116
 Web: tccmaterials.com

3. PRODUCT DESCRIPTION

Akona Non-Shrink Grout is a pourable, non-metallic, Portland cement-based material to be used for grouting steel columns, bearing plates, precast concrete, and anchors. Grout compensates for an uneven foundation, distributes weight of unit, and prevents shifting after setting and leveling unit. The material is made of aggregates, Portland cement and other additives to create an interior or exterior grout with non-shrinking characteristics.

Features and Benefits

- Non-shrink characteristics
- High strength
- Pre-blended - just add water and mix
- Capable of handling high load transfers
- Contains no chloride admixtures or other chemicals that would corrode steel

When/Where to Use

- Interior and exterior
- To fill holes
- Base plate grouting
- Anchoring
- Pre-cast wall panels
- Bridge seats

4. TECHNICAL DATA

Applicable Standards:

ASTM International

- ASTM C109/109M Standard Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 2-in. or (50 mm) Cube Specimens)
- ASTM C827 Standard Test Method for Change in Height at Early Ages of Cylindrical Specimens of Cementitious Mixtures
- ASTM C939 Standard Test Method for Flow of Grout for Preplaced Aggregate Concrete (Flow Cone Method)
- ASTM C1090 Standard Test Method for Measuring Changes in Height of Cylindrical Specimens from Hydraulic-Cement Grout
- ASTM C1107 Standard Specification for Packaged Dry, Hydraulic Cement Grout (Non-shrink)
- ASTM C 1437 Standard Test Method for Flow of Hydraulic Cement Mortar
- U.S. Army Corps of Engineers (USACE) - CRD 621

Meets or exceeds these physical properties:

- Complies with ASTM C1107
- Corps of Engineers Spec. CRD-C 621
- MN, WI, and NE DOT approved Non-Shrink Grouts

Typical Values • Non-Shrink Grout

Approximate Water per 50 lb. Bag

Plastic (trowel)	7 ½ pints (3.5 L)
Flowable (pump)	8 ½ pints (4 L)

Consistency of Flow

Plastic (trowel)	101%
Flowable (pump)	129%

Compressive Strength (ASTM C109)

Age	Plastic	Flowable
1 day	1,940 psi (13.8 MPa)	1,450 psi (10.0 MPa)
3 day	3,300 psi (22.8 MPa)	2,790 psi (19.2 MPa)
7 day	4,680 psi (32.3 MPa)	4,280 psi (29.5 MPa)
28 day	6,770 psi (46.7 MPa)	5,580 psi (38.5 MPa)

Height Change Expansion % (ASTM C1090)

Age	Plastic	Flowable
1 day	+0.05%	+0.03%
3 day	+0.15%	+0.13%
7 day	+0.13%	+0.11%
28 day	+0.12%	+0.10%

Available Size

- 50 lb. (22.7 kg) bag (BOM # 104953)

Coverage

Each 50 lb. bag will yield approximately 0.45 cu. ft. (12.7 L) of wet mortar

5. INSTALLATION

Preparation

Read all directions before starting work. Concrete surfaces should be fully cured (28 days).

1. Thoroughly clean all surfaces and substrates of chemical deposits, dirt, grease, form oils, efflorescence, paint, or other contaminants that could interfere with bonding. 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. Do not apply in direct sunlight on hot, windy days or when rain is expected within 24 hours.
2. Shut down any equipment in the vicinity that will cause vibration of the grout for at least 24 hours after placement.
3. **Presoak area to be grouted and remove excess water just prior to application.**

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. No bonding additive is needed.
2. Mix only the amount that can be applied within the 30 minute working time.
3. For best results, use a mechanical mixer with rotating blades.

Smaller amounts can be mixed by hand.

4. Add approximately ¾ of the expected mix water into the mixer, add the Non-Shrink Grout powder, add additional water in small increments until desired consistency is achieved (refer to “Typical Values” chart for mix water requirements). Water requirements may vary due to the temperature, mixing method, and desired consistency.
5. Mix to a uniform, lump-free consistency, no longer than 5 minutes. Non-Shrink Grout should not be re-tempered.
6. 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

1. After cleaning and pre-wetting the surface, place grout in a manner to avoid air entrapment. To avoid segregation, be careful not to overwork grout.
2. Create vent holes where necessary. A vibrator, rod, chain, or trowel may be used to assist in consolidating the grout and eliminating air voids. Forms should be sealed to prevent water or grout loss. Whenever possible, bolt holes should be grouted first.
1. Placement and consolidation should be continuous for any one section of the grout. Forms can be removed and excess grout should be trimmed from surfaces and edges after the grout has hardened to initial set.
2. Minimum application thickness is ½ in. (13 mm); maximum is 4 in. (100 mm).

Curing

After the patch has reached final set, during the first 24 hours, keep the patch damp or covered to prevent excessive loss of water, especially during hot and/or drying winds or when low humidity are present. Under such conditions, damp cure by covering the surface with wet burlap or towel overnight to retain moisture or lightly fog spray. After 24 hours, remove covering and allow to air cure. Damp curing is not required when used to repair smaller cracks.

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.
- Do not add any materials other than clean potable water.
- Do not use more than the recommended amount of water. Overwatering may cause shrinkage and cracking.
- Use only clean mixing containers and tools.
- Do not cover or fill expansion or control joints.
- Do not apply over concrete cured less than 28 days, or that 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

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