



HERITAGE RESTORATION MORTAR

Granite & Bluestone **15GB**

Mineral Based Natural Repair Binder For Granite & Bluestone

Description and Use

GB15 is a natural repair mortar specifically formulated for the patching and restoration of granite & bluestone. Designed to repair any areas of granite & bluestone including heavy traffic areas, window sills, steps and surface areas. GB15 can be featheredged, to repair small chips and spalls in granite & bluestone.

GB15 is a mineral-based, single component product that is mixed with water. It is formulated using only natural binders; no synthetic polymers or additives are used. GB15 has excellent freeze-thaw and salt resistance. It is vapor permeable. Skilled masons can easily apply GB15; no special certification is required.

Application and finishing of GB15 repair mortar is 8 to 12 times faster than for other commonly specified repair mortars. With GB15, most installations can be completed in 15 minutes, greatly reducing labor, mobilization and staging costs. This can produce considerable savings, especially where an installation is challenging or access to the repair site is difficult. A typical installation will vary depending on the surface matching requirements. With a commonly specified repair mortar, the same job could take 1 to 2 days to complete, due to lengthy curing procedures and low maximum lift requirements. GB15 is specially formulated to set quickly, and repair surfaces of granite & bluestone.

GB15 is specifically formulated to allow build up to a thickness of 3" at one time.

Advantages of GB15

- Can be applied in 15 minutes.
- No minimum application depth requirement.
- Manufactured using natural binders.
- Contains no synthetic polymers or additives; contains no Portland cement.
- Mineral-based formulation and natural binders make it completely compatible with substrate.
- Produces excellent adhesion to substrate.
- Does not create a vapor barrier.
- Provides good freeze-thaw and salt resistance.
- Easily used by skilled masons; no manufacturer's certification required.
- Requires no special curing in normal weather conditions.
- Custom colors available.

GB15 Package

1-gallon plastic pails 9 lbs.

5-gallon plastic pails 44 lbs.

Available in White.

Custom colors and aggregates available.

GB15 Technical Data

Application Time:	Approximately 15 minutes after mixing - depending on temperature, relative humidity and type of finish specified
Compressive Strength: (ASTM C-109)	1 day 5,800 psi 7 days 11,600 psi 28 days 13,100 psi
Bond Strength:	1,930 psi (ASTM C-882)
Flexural Strength:	2,103 psi (ASTM C-348)
Modulus of Elasticity:	4000 ksi (ASTM C-469)
Linear Coefficient of Thermal Expansion:	7 to 8 x 10 ⁻⁶ /°C
Length Change:	0.005 to 0.010 % (28 days) (ASTM C-157)
Specific Gravity:	2.2
Mixing Ratio:	Approximately 5 parts powder to 1 part water by volume
Coverage:	5 gallons (44 lbs.) will cover 6 square feet at 1" thickness or 0.5 cubic feet

Surface Preparation

Cut away all loose and deteriorated stone. Clean the area to be repaired with clean water and a bristle brush to remove any loose stone particles. Neutralize any salt deposits (efflorescence) with distilled water. Sound off and chisel out delaminated stone.

Mixing

All repairs require a minimum two-coat application consisting of a skim coat and a build-out coat. Additional build-out coats may be applied to meet the required thickness.

Skim coat: For the initial skim coat, mix approximately 5 parts dry powder to approximately 1 part potable water. The prepared mixture should be the consistency of peanut butter. Temperature and humidity will affect the amount of water required. Mixing may be done by hand or using a low-speed drill (300 to 450 rpm) for 2 to 4 minutes. Do not over mix.

Build-Out Coat: The consistency of the mortar for the build-out coat should be similar to wet sand. Add pigments and aggregates to match existing stone. Aggregates may be added up to 60% of binder volume. For any additional build-out coats use slightly less water in the mix. Working time is approximately 15 minutes depending on temperature, humidity and wind conditions.

Installation & Finishing

Binder coat: Remove loose material from the stone. We recommend the installation of non-corrosive screws and wires when the stone repair exceeds 4" in thickness. Use trowels and plaster detailing tools to apply the skim coat to small areas.

IMPORTANT: Make sure the skim coat adheres to all surfaces of the repair area of the stone. Do not allow the surface of the skim coat to dry completely. The drying time will be affected by weather conditions, so monitor carefully.

Additional Coats: Scoop wet mix from the mixing container by hand (wear latex gloves) or with a small trowel and apply it by pressing and rubbing it into the skim coat. Make sure to fill all pores and voids of the stone. The repair mortar may be built up to a thickness of 3" in one lift. If additional coats are applied the next day or later, you must wet and scratch the previous coat before adding additional coats. For large repairs framing can be used.

Windowsills and Steps: GB15 can be used to repair granite & bluestone windowsills, steps and traffic areas. Surface imperfections such as chips or spalls can be repaired using GB15.

Finishing: The surface of the repair may be ground down and polished to the required finish. You may finish the same day or wait until the following day. For sharp edges, grind down the surface with power tools when it is fully cured. It may be desirable to wait longer for particular finishes. Always test finishing techniques before applying to large areas. Craftsmen should understand the timing of the finishing techniques, and make adjustments for weather conditions. Air chisels may be used to create the desired finishes.

Curing Procedures: No special procedures are necessary.

Limitations of GB15

- Cannot be mixed or applied at temperatures below 40°F or above 90°F.
- Cannot be used to consolidate loose stone.
- Cannot be used with other bonding agents.
- GB15 should be used for the full depth of the repair, because building out with another material other than GB15 may cause cracking of GB15.
- Cannot be re-tempered. (Mix only as much as you can use in 15 minutes.)

Clean Up

Remove mortar from tools and mixing equipment with water immediately after use. Repair mortar is difficult to remove after it has set.

Storage & Handling

Storage: GB15 repair mortar should be stored in a dry location, at a temperature above 32° F. Product shelf life is one year in the original, unopened container.

Safety Recommendations: Precautions should be taken to avoid eye contact, prolonged skin contact and inhalation of dust during mixing. Protective eyewear and gloves should be worn while mixing and applying this product. A dust mask with NIOSH-approved silica dust filters/P-2 filters should be worn while mixing. For complete safety and handling information, see MSDS information. **Caution:** Not for human consumption. Keep out of reach of children and animals.

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Additional information and illustrated examples of projects using Heritage Restoration Mortars can be found at www.usheritage.com



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