



VersaMortar

Product Data Sheet

DESCRIPTION VersaMortar is a pre-formulated dry mix mortar for use in restoration, renovation and new construction projects.

FEATURES

- Natural Lime-based
- Anti-cracking
- Superior sag resistance
- Durable, long-lasting
- Mitigates efflorescence
- Applies easily
- Zero VOC, non-toxic, SCAQMD compliant.

COLOR
WHITE

PRODUCT PARTICLE SIZE
3.0 mm

PACKAGING
50 LB

COVERAGE
VersaMortar covers approximately 15 square feet per 3/8" coat.

PURPOSE

VersaMortar is a premium quality Lime-based mortar used as an alternative to Portland cement-based mortars commonly used in restoration, renovation and new construction projects.

The product is made of high-purity limestone, lime, pumice and select natural pozzolans.

VersaMortar has excellent rheology (sag-resistance) and can be used as a fill-coat mortar, injection mortar, leveling screed mortar, and other versatile applications such as a casting mortar for ornamental applications.

VersaMortar has a natural ability to mitigate moisture entrapment and functions to counteract against the proliferation of molds, mildew and bacteria.

EXPERIENCED INSTALLERS

VersaMortar is intended to be applied by professional applicators who demonstrate experience and craftsmanship and meet the application requirements of BIOLIME product endorsement.

SUBSTRATE

Substrates that apply:

- All masonry
- Stone & Rock wall construction
- Precast concrete (smooth-faced)
- Concrete Masonry Unit (CMU)
- Damaged/distressed wall surfaces
- Rough-cast stone
- Brick & Tile

Consult with BIOLIME for specific recommendations concerning non-traditional wall systems or surfaces.

TECHNICAL INFORMATION

Consult our Technical Services Department for specific recommendations concerning all other applications. Consult www.biolime.com for additional information about products and systems and for updated literature.

HEALTH, SAFETY AND ENVIRONMENTAL

Read, understand and follow all Safety Data Sheets (SDS) and product label information for this product prior to use. The SDS can be obtained by visiting www.biolime.com. Use only as directed.

Lime is a naturally caustic (rapid absorption) material and because of its elevated pH, creates an alkaline reaction when combined with water. Protect the eyes and skin from exposure. Keep out of reach of children. Dust may cause irritation to eyes, skin, nose, throat and upper respiratory tract. Avoid irritation by reducing exposure to dust. Use in a well-ventilated area or provide sufficient local ventilation. Do not ingest. When mixing product wear a NIOSH/MSHA-approved dust respirator and always wear eye protection. If eye contact occurs, flush thoroughly with water for 15 minutes. If irritation persists, call a physician.

DISCLAIMER

BIOLIME shall not be liable for incidental and consequential damages, directly or indirectly sustained, nor for any loss caused by application of these goods not in accordance with current printed instructions or for other than the intended use. Our liability is expressly limited to replacement of defective goods.

BioLime VersaMortar

Application

PREPARATION

Surfaces should be clear and clean of any inconsistent parts, dust, oils, mildew, organic matter, salt efflorescence or any other loose material which should hinder proper adhesion to the applied surface.

Highly absorbent substrates must be spray-misted and moistened (not saturated) with clean water using a tank sprayer prior to application to allow the product to properly bond to the substrate.

MIXING

VersaMortar is a pre-blended product and requires only mixing with water on the job-site.

BioLIME VersaMortar requires **6.0 - 6.5 quarts of water per 50 Lb bag.** (Use manufacturer's measuring bucket).

Mix the product with a heavy duty mortar mixing drill equipped with proper mixing paddle as shown.

BioLime recommends the use of a 2-speed drill with low torque capacity, such as a Milwaukee 1/2" Hole-Hawg® Drill 300/1200 RPM (as shown) and the BioLime 4.5" helical mixing paddle (as shown).

1. Fill the mortar manufacturer's measuring bucket with clean water to the referenced product margin line.
2. In a clean 6-gallon plastic bucket, pour half of the measured water.
3. While stirring the water at low RPM, add mortar from the bag at a rate to prevent clumping of the material. Continue adding water from the measuring bucket and dry mortar until bag is empty.
4. Once the dry powder is wetted, mix for additional 3 minutes maximum. Allow to rest 5 minutes to fully hydrate and then stir to relax the batch. Over-mixing mortar will cause loss of strength. Keep bucket covered to extend working time to about 1 hour.
5. Make sure to avoid mixing times exceeding 3 minutes as a significant drop in strength can occur.



Milwaukee 1/2" Hole-Hawg® Drill
300/1200 RPM



BioLime® 4.5" Helical
Mixing Paddle

APPLICATION

Consult with BIOLIME for specific recommendations concerning non-traditional mortar applications.

Ensure surface is free of construction dust and debris or loose particulate.

Prewet masonry surfaces relative to their absorbency. Highly absorbent surfaces require more hydration. Once water has evaporated from surface, with substrate holding and retaining moisture, application may begin.

Apply mortar with even distribution to a maximum 3/4-inch layer thickness.

Trowel surface smooth and in plane, or as desired.

CURING

For every 3/8" (9.5 mm) of thickness, moist-cure for 3 (three) cycles by flooding entire surface with cool, clean water at 0 PSI (no pressure).

Rule: Each coat requires 3 (three) cure cycles.

CURE CYCLE: A cure cycle begins when the entire surface is dry, then hydrated. This technique ensures the "active" pozzolans in the mortar bond together as a whole, hardening in the process.

PROCEDURE:

1. Begin the first cure cycle using "appearance-based determination" for each mortar layer.
2. As applied mortar dries, the appearance changes from dark to light. When dark, it is visibly damp. As water evaporates from the layer, it becomes lighter in contrast to the damp areas. In mid-transition between damp and dry, the surface appears mottled. Once mottling disappears and the entire surface area is dry, the moisture-curing cycles can begin by hydrating the surface.
3. Weather conditions and mortar layer thickness affect how quickly the mortar transitions from damp to dry. In dry weather, moisture-curing cycles might begin the day of application while in humid weather the cycles might start the following day. Appearance-based determination ensures proper sequencing of the moisture-curing coats for each applied layer of mortar.
4. Once moisture-curing begins, flood all surfaces including terminations at soffits, inside and outside corners, and window/door returns with clean water. This constitutes one moisture-curing cycle. Moisture-curing cycles continue based on layer thickness, as noted in **CURING**.

Note:

RAIN: PROTECT FRESHLY APPLIED MORTAR SURFACE.
FROST: DO NOT APPLY IF CONDITIONS EXIST.

BioLime VersaMortar

Technical Data

Property	ASTM Test Method	Result
Compressive Strength	ASTM C 109	7-day: 479 psi 28-day: 728 psi
Flexural Strength	ASTM C 78	7-day: 123 psi
Adhesion Strength	ASTM C 1583 pull-off	7-day concrete block: 109 psi
Solar Reflectance	ASTM C 1549 ASTM	0.83
Water Vapor Transmission	ASTM D 1653	97 perms
Freeze-thaw	INHOUSE	No deleterious effects after 90 cycles
Water Resistance	IN-HOUSE	No deleterious effects after 14 days
Efflorescence	IN-HOUSE	No sign of efflorescence
UV Exposure	IN-HOUSE	210 hours of exposure - Unaffected
Accelerated Aging	IN-HOUSE	25 cycles of drying and soaking
VOC	SCAQMD Method 304	-0.2 wt%
VOC	ASTM D 2369	-9 g/mL
Mildew Resistance	IN-HOUSE	No growth during 60 day exposure period
Water Resistance	IN-HOUSE	No deleterious effects after 90 days exposure
Salt Spray Resistance	IN-HOUSE	No deleterious effects after 1000 hours exposure
Fire Resistance	IN-HOUSE	Class 1A: Non-combustible
Density	ASTM D1475	1.81 g/cc

Test results are averages obtained under laboratory conditions. Reasonable variations can be expected.

WARRANTY

BIOLIME warrants this product to be free from manufacturing defects. Satisfactory results depend not only on quality products but also upon many factors beyond our control. BIOLIME MAKES NO OTHER WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO ITS PRODUCTS. The sole and exclusive remedy of Purchaser for any claim concerning this product, including but not limited to, claims alleging breach of warranty, negligence, strict liability or otherwise, is shipment to purchaser of product equal to the amount of product that fails to meet this warranty or refund of the original purchase price of product that fails to meet this warranty, at the sole option of BIOLIME. Any claims concerning this product must be received in writing within thirty (30) days from the date of shipment and any claims not presented within that period are waived by Purchaser. BIOLIME WILL NOT BE RESPONSIBLE FOR ANY SPECIAL, INCIDENTAL, CONSEQUENTIAL (INCLUDING LOST PROFITS) OR PUNITIVE DAMAGES OF ANY KIND.

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