



## Portland Cement, Lime & Sand Mortar AMX 400 Type M, S, N

Product # AMX 400 M, S, N



### 1. PRODUCT NAME

Amerimix AMX 400 Portland Cement, Lime & Sand Mortar Type M  
Amerimix AMX 400 Portland Cement, Lime & Sand Mortar Type S  
Amerimix AMX 400 Portland Cement, Lime & Sand Mortar Type N

### 2. MANUFACTURER

Bonsal American  
8201 Arrowridge Blvd.  
Charlotte, NC 28273-5678 USA  
Telephone: 704-525-1621  
Toll Free: 800-738-1621 ext.27000  
Fax: 704-529-5261  
Internet: [www.amerimix.com](http://www.amerimix.com)

### 3. PRODUCT DESCRIPTION

Amerimix AMX 400 Portland Cement, Lime and Sand Mortar is a factory blend of portland cement, hydrated lime, and dried sand with a formulation engineered to provide long water retention, exceptional workability and superior bond strength over masonry substrates.

### FEATURES AND BENEFITS

- Factory blended under controlled conditions for mix consistency
- High bond strength
- Extended mortar board life, less re-tempering required
- Increased yield compared to typical field mix mortars
- May be pigmented

### USES

- Interior or exterior applications
- Above or below grade
- Laying or resetting brick, block and stone
- For all masonry veneer work

### PACKAGING

Available in 80lb. (36kg) bags or bulk bags

### APPROXIMATE COVERAGE

One 80 lb. bag yields approximately .78 cu. ft and will lay up to 12 concrete blocks or 36 standard bricks with 3/8" mortar joints, or 17 sq. ft. of manufactured stone. One 3,000 lb. bulk bag will lay up to 450 concrete blocks or 1350 standard bricks.

### LIMITATIONS

1. The type of mortar selected should be coordinated with the type of application, type of masonry units and intended use. Mortars with lesser compressive strength should be used with softer masonry units or tuck pointing applications.
2. The optimal temperature range for mortar application is between 40 and 90 degrees. Application outside of this range is possible when appropriate precautions for cold or hot weather construction are implemented in compliance with ACI, PCA, ASTM, IMIAC or Masonry Institute standards.
3. Agitate material as necessary within its working time to maintain workability.
4. Do not add materials other than clean potable water.
5. Water with a high mineral salt content can cause efflorescence. Efflorescence occurs naturally and is beyond the control of Amerimix.
6. Do not overwater. Avoid adding excessive amounts of water that promote segregation or bleeding of the mortar, and loss of strength and durability.
7. Protect uncoated aluminum from direct contact with portland cement based materials.
8. Shelf life not to exceed one year from date of manufacture.
9. Not to be used as grout for traffic bearing surfaces.
10. Type N to be used for above grade applications.

NOTE: Amerimix AMX 400 Portland Cement, Lime and Sand Mortar should be installed in accordance with the provisions of applicable ASTM standards and the local building code. Always follow traditional industry best practices appropriate for the application and weather conditions. Good workmanship in conjunction with proper design and detailing assures durable, efficient, water-tight construction.

### SAFETY

READ THE MATERIAL SAFETY DATA SHEET (MSDS) BEFORE USING THIS PRODUCT. MSDS Sheets are available on our website [www.amerimix.com](http://www.amerimix.com) or contact CHEMTREC (24 hours availability) 800-424-9300 for International inquiries +01-703527-3887, or contact Bonsal American Technical Services at 800-334-0784 (8:00 AM to 5:00 PM Eastern US Time).

#### 4. TECHNICAL DATA

Meets or exceeds the following:

ASTM C270 Property Specification Requirements

Mortar	Average Compressive Strength Minimum psi (MPa)	Water Retention Minimum %	Air Content Maximum %
Type M	28 Days 2500 (17.2)	75	12
Type S	28 Days 1800 (12.4)	75	12
Type N	28 Days 750 (5.2)	75	12

#### NOTES

- Mortar is designed to meet the requirements of ASTM C 270 Standard Specification for Mortar for Unit Masonry. This is a laboratory test procedure.
- Mortar should be tested in the field by ASTM C 780 Standard Test Method for Preconstruction and Construction Evaluation of Mortar for Plain and Reinforced Unit Masonry.
- Due to the procedural differences between ASTM C 270 and C 780, the compressive strength values resulting from field sampled mortars are not required nor expected to meet the compressive strength of the property specification requirements of C 270 as tested under laboratory conditions, nor do they represent the compressive strength of the mortar in the wall.

#### APPLICABLE STANDARDS

##### American Concrete Institute (ACI)

- ACI 530.1 Specification for Masonry Structures

##### ASTM International (ASTM)

- ASTM C 91 Standard Specification for Masonry Cement
- ASTM C 150 Standard Specification for Portland Cement
- ASTM C 207 Standard Specification for Hydrated Lime for Masonry Purposes
- ASTM C 270 Standard Specification for Mortar for Unit Masonry
- ASTM C 387 Standard Specification for Packaged, Dry, Combined Materials for Mortar and Concrete
- ASTM C 595 Standard Specification for Blended Hydraulic Cements
- ASTM C 780 Standard Test Method for Preconstruction and Construction Evaluation of Mortars for Plain and Reinforced Unit Masonry
- ASTM C 979 Standard Specification for Pigments for Integrally Colored Concrete
- ASTM C 1093 Standard Practice for Accreditation of Testing Agencies for Unit Masonry
- ASTM C 1157 Standard Performance Specification For Hydraulic Cements
- ASTM C 1314 Standard Test Method for Compressive Strength of Masonry Prisms
- ASTM C 1384 Standard Specification for Admixtures for Masonry
- ASTM C 1586 Standard Guide for Quality Assurance of Mortar

##### International Masonry Industry All-Weather Council (IMIAC)

- Recommended Practices and Guide Specifications for Cold Weather Masonry Construction
- Recommended Practices and Guide Specifications for Hot Weather Masonry Construction

#### National Concrete Masonry Association (NCMA)

- NCMA TEK Bulletin #8-2A Removal of Stains from Concrete Masonry
- NCMA TEK Bulletin #8-3A Control and Removal of Efflorescence

#### SUSTAINABILITY

Amerimix products generally qualify for LEED Materials and Resources credits for Recycled Materials and Regional Materials. Visit [www.amerimix.com](http://www.amerimix.com) or contact Technical Services for additional information regarding LEED qualifications for your specific product application and project location.

#### 5. INSTALLATION

##### PREPARATION

- Remove all loose particles, dirt, dust, or any foreign materials that would inhibit proper bond to brick, block, stone or masonry substrate.
- Certain conditions may require the substrate to be SSD (saturated surface dry) conditioned such as dry windy climates, porous substrates, or high temperatures.

##### JOB MOCK UPS

Bonsal American requires that when Amerimix AMX 400 Portland Cement, Lime and Sand Mortar is used in any application or as part of any system that includes other manufacturers' products, the contractor and/or design professional shall test all the system components collectively for compatibility, performance and long-term intended use in accordance with pertinent and accepted industry standards prior to any construction. Written documentation of the test performed shall be satisfactory to the design professional and contractor. Test results must include the means and methods of application, products used, project-specific conditions being addressed, and standardized tests performed for each proposed system or variation. Approved mock ups or sample panels should be retained until completion of the project.

##### MIXING

1. Use of a mechanical mixer will help ensure a better uniform mix.
2. Using clean potable water, approximately 1.5 gallons per 80 lb bag. Pour approximately 3/4 of the required amount into the mixer. For mixing from a silo, use the same approximate water ratio and follow the same procedures.
3. With the mixer running, add bags of dry mortar or dispense from silo and mix thoroughly.
4. A minimum of 5 minutes mixing time is recommended.
5. Add additional water in small amounts as necessary to achieve optimum consistency and workability. Mix for a minimum of 5 minutes adding enough of the remaining water to achieve a fluid workable consistency. Caution: Adding too much water will reduce strength.
6. Let mix stand for 2 minutes to enable absorption of water and re-mix.
7. Addition of cold water at high temperatures or warm water at low temperatures will aid in adjusting the set time.

## PERFORMANCE RECOMMENDATIONS

1. Only water lost to evaporation should be replaced by re-tempering, not water lost to hydration. The re-tempering of mortar will alter color and appearance of the mortar joint and may also reduce bond and compressive strength.
2. Concave tooling of joints should be performed when mortar joint is thumbprint hard. For consistency of finish and color, joints should be struck with consistent timing, avoiding early or late tooling.

## CURING

Under conditions of temperatures >80 degrees F (26.6 degrees C.), low humidity and wind, loss of surface water occurs quickly. Fog spray as needed, depending upon conditions. Protect from rain and freezing for 24 hours.

## CLEANING

Use water to clean all tools immediately after use. Dried material must be mechanically removed. For cleaning mortar joints, use the least aggressive solvent required to accomplish the task. Only clean potable water should be used in the cleaning process.

## 6. AVAILABILITY

Amerimix products are available throughout the U.S. and Canada.

For information please contact Amerimix at

Toll Free: 888-313-0755

Email: support@amerimix.com

Website: www.amerimix.com

## 7. TECHNICAL SUPPORT

For technical assistance please contact us

Toll Free: 800-334-0784

Fax: 704-945-0309

## 8. WARRANTY

### LIMITED WARRANTY

**What Does This Warranty Cover?** Bonsal American warrants that this product will (a) be free from defects in material and workmanship, and (b) conform to specifications set forth in Bonsal American's product literature at the time of manufacturer.

**How Long Does Coverage Last?** This warranty lasts for a period of one (1) year from the date of purchase. ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE IS LIMITED TO THE DURATION OF THIS EXPRESS WARRANTY. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

**What Will Bonsal American Do to Address Problems?** Bonsal American will replace the defective product or refund the purchase price, at its option.

**What Does This Warranty Not Cover?** Bonsal American will not be liable for damage or loss resulting from a failure to store, use, install or maintain the product in strict accordance with Bonsal American's specifications and instructions. In no event will Bonsal American be liable for damages in excess of the purchase price for the product. CONSEQUENTIAL, SPECIAL AND INCIDENTAL DAMAGES ARE NOT RECOVERABLE UNDER THIS WARRANTY. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

**How Do I Get Warranty Service?** Within thirty (30) days after discovering a defect in the product, contact Bonsal American in writing at the following address:

Bonsal American  
Technical Support Group  
8201 Arrowridge Boulevard  
Charlotte, NC 28273

Include with your letter a brief description of the problem and any sales receipt, invoice or other proof of the date of purchase. To obtain Bonsal American's technical or sales literature, please call (800) 738-1621 or visit our web site at [www.bonsalamerican.com](http://www.bonsalamerican.com).

**How Does State Law Relate to This Warranty?** This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

**WARNING - INJURIOUS TO EYES. CAUSES SKIN IRRITATION.**

This product contains portland cement and silica sand. Avoid contact with eyes and skin. Do not take internally. Crystalline silica sand may cause serious lung problems. Avoid breathing dust and wear a respirator in dusty areas. Contact with wet unhardened concrete, mortar, cement or cement mixtures can cause skin irritation, severe chemical burns or serious eye damage. Wear waterproof gloves, a fully buttoned long-sleeved shirt, full-length trousers and tight fitting safety goggles. If you have to stand in wet product, wear waterproof boots high enough to keep product from getting inside. If working on hands and knees, wear kneepads. Indirect contact through clothing can be as serious as direct contact. Promptly, rinse out wet product from clothing.

**KEEP OUT OF THE REACH OF CHILDREN AND ANIMALS.**

This product contains a chemical known to the state of California to cause cancer. Consult Material Safety Data Sheet for further information.

**FIRST AID:** Eye Contact: Flood eyes with water for at least 15 minutes and consult a physician immediately. DO NOT RUB EYES. Skin Contact: Wash exposed skin area with soap and water. Consult a physician if irritation persists. Inhalation: Remove to fresh air. Ingestion: Immediately consult a physician.

For additional information, call Bonsal American at 704-525-1621 or CHEMTREC at 800-424-9300 or 703-527-3887 outside of the USA. Refer to Material Safety Data Sheet (MSDS) for further information.

**ENVIRONMENTAL ADVISORY:** Uncured or crushed cured cement is an environmental hazard, which may adversely affect fish and wildlife. Dispose of construction debris containing cement, including empty bags, at a permitted municipal disposal firm. Do not use crushed concrete as a fill near an aquatic habitat.



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