

AMX 400 Type M, S, N Portland Cement Lime Mortar

Product # AMX 400 M, S, N



1. PRODUCT NAME:

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

2. PRODUCT DESCRIPTION:

Amerimix AMX 400 (M,S,N) Portland Cement, Lime and Sand Mortar is a factory blend of Portland cement, hydrated lime, and dried masonry sand with a highly engineered formulation that meets applicable ASTM and ACI standards, provides long water retention, exceptional workability and superior bond strength over masonry substrates.

Features and Benefits:

- Meets property requirements of ASTM C1714 and ASTM C270
- Available in Type M, S, and N
- Factory blended under controlled conditions to meet strict quality control standards for mix consistency and engineered performance tolerances
- High bond strength to masonry units
- Extended mortar board life, less re-tempering required
- Increased yield compared to typical field mix mortars
- Masonry parging

Uses:

- For load and non-load bearing construction
- Laying or resetting brick, block, and stone
- Brick and block tuck pointing
- Above and below grade applications (type N above grade only)
- Scratch and brown or finish coat
- Masonry parging

Packaging:

Available in 80 lb. (36.3 kg) bags and 3000 lb. (1,360 kg) bulk bags

Approximate Coverage:

Bag Size / Water	Yield – For Laying Brick, Block or Cultured Stone
80 lb. (36.3 kg) 1.5 gal (5.7L)	Yield 0.78 ft ³ (0.02 m ³) will lay 12 x 8-inch (200 mm) concrete block, 40-50 standard brick with 3/8" (9.5 mm) mortar joints or 17 ft ² (1.6 m ²) of manufactured stone.
Bulk Bag 3,000 lb. (1,360 kg)	Yield 29.3 ft ³ (0.75 m ³) will lay up to 450 x 8-inch (200 mm) concrete blocks or 1350 standard brick with 3/8" (9.5 mm) mortar joints.

* *Water demands shown are to be used as a starting reference. More water may be required to achieve desired consistency. Avoid overwatering*

NOTE: Yield and water are approximate.

The yield above does not allow for waste and spillage.

Safety:

READ THE SAFETY DATA SHEET (SDS) BEFORE USING THIS PRODUCT. SDS sheets are available on our website Amerimix.com or you can contact CHEMTREC (24 hours availability) 800-424-9300 or contact Amerimix Technical Services at 800-334-0784.

3. TECHNICAL DATA:

Mortar	Required strength @ 28 days	AMX 400 strength results (PSI)	ASTM C270 Water retention min.	AMX 400 water retention results	ASTM C270 max air content	AMX 400 air content
Type M	2500 psi (17.2 MPa)	>2500	75%	>75%	12%	<12%
Type S	1800 psi (12.4 MPa)	>1800	75%	>75%	12%	<12%
Type N	750 psi (5.2 MPa)	>750	75%	>75%	14%	<14%

Testing Notes:

- ASTM C270 Standard Specification for Mortar for Unit Masonry.
- Mortar should be tested in the field by following ASTM C780, Standard Test Method for Preconstruction & Construction Evaluation of Mortar for Plain & Reinforced Unit Masonry.
- Due to the procedure differences between ASTM C270 & ASTM C780, the compressive strength values resulting from field sampled mortars are not required nor expected to meet the minimum compressive strengths of the property specification requirements of

ASTM C270 as tested under controlled laboratory conditions nor do they represent the compressive strength of the mortar in the wall.

Applicable Standards:

Refer to:

ACI 530.1 Specification for Masonry Structures

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

ASTM International (ASTM)

- ASTM C150 Standard Specification for Portland Cement
- ASTM C207 Standard Specification for Hydrated Lime for Masonry Purposes
- ASTM C270 Standard Specification for Mortar for Unit Masonry
- ASTM C387 Standard Specification for Packaged, Dry, Combined Materials for Mortar and Concrete
- ASTM C595 Standard Specification for Blended Hydraulic Cements
- ASTM C780 Standard Test Method for Preconstruction and Construction Evaluation of Mortars for Plain and Reinforced Unit Masonry
- ASTM C979 Standard Specification for Pigments for Integrally Colored Concrete
- ASTM C1157 Standard Performance Specification for Hydraulic Cements
- ASTM C1314 Standard Test Method for Compressive Strength of Masonry Prisms
- ASTM C1384 Standard Specification for Admixtures for Masonry
- ASTM C1586 Standard Guide for Quality Assurance of Mortar
- ASTM C1714 Standard Specification for Preblended Dry Mortar Mix for Unit Masonry

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. Contact the Amerimix area rep., Visit Amerimix.com or contact Technical Services for additional information regarding LEED qualifications for your specific product application and project location.

4. INSTALLATION

Preparation/Application:

1. For best results all materials should be stored between 40°F (4°C) and 80°F (27°C) 24 hours prior to application. 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. For existing surfaces proper preparation is critical. Remove all loose particles, dirt, dust, or any foreign materials that would inhibit proper bond to brick, block, stone, or masonry substrates.

3. Certain conditions may require the substrate to be SSD (saturated surface dry) conditioned such as dry windy climates, porous substrates, or high temperatures.

Laying Brick/Block:

1. AMX 400 should be installed in accordance with the provisions of applicable ASTM standards, product published specifications and local building code requirements. Always follow traditional industry best practices appropriate for the application and weather conditions.
2. When laying brick or block, a sound footing must be in place following project architectural/engineered specifications and or consulting with your local building code for required footing size and depth.
3. Apply a full bed of mortar onto the base/footing where the brick or block will be placed.
4. Butter the end of the brick or block with mortar before placing into the full bed of mortar. Tap into place while leveling. Continue establishing a brick pattern.
5. Agitate material as necessary within its working time to maintain workability. Do not add any additional water.
6. Tool joints once the mortar has set up enough and is thumb print hard. For consistency of finish and color, joints should be struck with consistent timing, avoiding early or late tooling.
7. For cleaning, cure mortar for a minimum of 7 and no more than 28 days.

NOTE: Good workmanship in conjunction with proper design and detailing assures durable, efficient, watertight construction.

Tuck Pointing:

1. Remove any existing soft, loose, unsound mortar from the mortar joints. Surface must be clean and free of any dirt, paint, sealers, or any foreign materials that would inhibit bond.
2. Bring the area to a Surface Saturated Dry (SSD) condition by misting the area with a hose or spray bottle.
3. Place mortar into the joint with a tuck-pointing trowel.
4. Use the tuck-pointing trowel to tool the joint and compact for a tight neat appearance.

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

Job Mock Ups

Amerimix requires that when Amerimix Portland Cement, Lime, and Sand Mortar – AMX 400 is used in any application or as part of any system that includes other manufacturer's product, 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.

Limitations:

1. The optimal temperature range for mortar application is between 40°F and 90°F (4°C and 32°C). Application outside of this range is possible when appropriate precautions for cold or hot weather construction are implemented in compliance with ACI, PCA, ASTM or Masonry Institute standards.
2. Agitate material as necessary within its working time to maintain workability.
3. Do not add materials other than clean potable water.
4. Water with high mineral salt content can cause efflorescence. Efflorescence occurs naturally and is beyond the control of Amerimix.
5. Do not overwater. Avoid adding excessive amounts of water that promote segregation or bleeding of the mortar, and loss of strength and durability.
6. Protect uncoated aluminum from direct contact with Portland cement-based materials.
7. Shelf life not to exceed one year from date of manufacture.
8. Not to be used as a grout for traffic bearing surfaces.
9. Type N to be used for above grade applications only.

Mixing:

1. Use of a mechanical mixer will help ensure a more uniform mix.
2. Use approximately 1.5 gal (5.7 L) of clean potable water per 80 lb. (36.3 kg) bag. Pour approximately $\frac{3}{4}$ of the required water amount into the mixer.
3. With the mixer running, add bags of dry mortar and mix thoroughly.
4. Add remaining water in small amounts as necessary to achieve optimum consistency and workability. Mix for a minimum of 5 minutes.
5. Let mix stand for 2 minutes to enable the absorption of water and re-mix.
6. Mortar should always be mixed to a firm, moist consistency. A mix that is too dry and crumbly will not provide the proper bond. AVOID A SOUPY MIX. Mortar that is too wet will be weak and will not provide adequate bond to the substrate and can result in reduced strength, efflorescence, cracking, dusting, or scaling.
7. Agitate material as necessary within its working time to maintain workability. Do not add any additional water.

Performance Recommendations:

The re-tempering of mortar will alter color and appearance of the mortar joint and may also reduce bond and compressive strength.

Curing:

Loss of surface water may occur quickly due to higher ambient air temperatures and windy conditions. Fog spray as needed. Protect from rain and freezing for 24 hours.

Safety:

READ AND UNDERSTAND the Material Safety Data Sheet (MSDS) before using this product. WARNING: Wear protective clothing and equipment. For emergency information, call CHEMTREC at 800-424-9300 or 703-527-3887 (outside USA). KEEP OUT OF REACH OF CHILDREN.

5. AVAILABILITY

Amerimix products are available throughout the US and Canada.

For more information, contact Amerimix at:

Toll-Free: 866-725-7383

Website: Amerimix.com

6. TECHNICAL SUPPORT

For technical assistance please contact us at:

Toll-Free: 866-725-7383

7. WARRANTY

What Does This Warranty Cover?

Amerimix warrants that this product will (a) be free from defects in material and workmanship, and (b) conform to specifications set forth in Amerimix's product literature at the time of manufacture.

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 Amerimix Do to Address Problems?

Amerimix will replace the defective product or refund the purchase price, at its option.

What Does This Warranty Not Cover?

Amerimix will not be liable for damage or loss resulting from a failure to store, use, install or maintain the product in strict accordance with Amerimix's specifications and instructions. In no event will Amerimix 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 Amerimix in writing at the following address:

Amerimix Technical Support Group

625 Griffith Road - Suite 100

Charlotte, NC 28217

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 Amerimix's technical or sales literature, please call (888) 313-0755 or visit our website at Amerimix.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.

DANGER:

This product contains Crystalline Silica and Portland Cement which are known to cause cancer, eye damage, lung disease, respiratory damage, silicosis, skin burns, and other serious medical conditions. Harmful if swallowed and corrosive.

CAUTION:

Do not handle or use this product until you review and understand the instructions, including the safety precautions. The applicable safety precautions include wearing protective clothing, protective eyewear, protective footwear, protective gloves, and respiratory protection when handling or working around this product. Protective clothing should include face protection, impervious gloves, long pants, and a long-sleeved shirt. Eye and respiratory protection must comply with the guidelines of the Occupational Health and Safety Administration (OSHA). Do not breathe or otherwise ingest the dust from this product. Wash hands and clothing after handling or working around this product. This product should only be used outdoors or in a well-ventilated area and the user should avoid creating dust. Dispose of unused concrete products in accordance with applicable law. Review the Safety Data Sheet, which is available online at www.sakrete.com, prior to handling or using this product.

KEEP OUT OF REACH OF CHILDREN.**FIRST AID:**

Seek medical attention if you experience skin burns or irritation. If you ingest this product, rinse your mouth with water and seek medical attention if you feel ill. In the event of eye irritation, remove any contact lenses and carefully rinse eyes with water for several minutes. If eye irritation persists, seek medical attention. If inhaled, relocate to an area with fresh air and seek medical attention if you feel ill.

WARNING:

This product can expose you to chemicals including Crystalline Silica, which is known to the State of California to cause cancer, and Lithium Carbonate, which is known in the State of California to cause birth defects or other reproductive harm. For more information, go to www.P65Warnings.ca.gov.

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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