



1. Product Name

- SPEC MIX® Portland Lime & Sand
- SPEC MIX® Portland Lime & Sand Color
- SPEC MIX® Masonry Cement & Sand
- SPEC MIX® Masonry Cement & Sand Color
- SPEC MIX® Mortar Cement & Sand
- SPEC MIX® Mortar Cement & Sand Color
- SPEC MIX® Tuckpoint Mortar

2. Manufacturer

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3. Product Description

BASIC USE

- SPEC MIX® Portland Lime & Sand - A pre-blended masonry mortar mix containing Portland Cement, hydrated lime and Dried Masonry Sand
- SPEC MIX® Portland Lime Sand & Color - A preblended masonry mortar mix containing Portland Cement, hydrated lime, Dried Masonry Sand and pigment
- SPEC MIX® Masonry Cement & Sand - A preblended masonry mortar mix containing Mason Cement and Dried Masonry Sand
- SPEC MIX® Masonry Cement, Sand & Color - A preblended masonry mortar mix containing Mason Cement, Dried Masonry Sand and pigment
- SPEC MIX Mortar Cement & Sand is a dry, pre-blended mortar mix containing Mortar Cement and Dried Masonry Sand
- SPEC MIX Mortar Cement, Sand & Color is a dry, preblended mortar mix containing Mortar Cement, Dried Masonry Sand and pigment
- SPEC MIX® Tuckpoint Mortar - A preblended masonry mortar mix containing Dried Masonry Sand and either Portland Cement and Hydrated Lime or Mason Cement, as specified. Pigments can also be added when specified Available in Type M, S, N or O, SPEC MIX

masonry mortars are packaged dry and offer batch-to-batch consistency. They are suited for all types of masonry construction, including above grade, below grade, brick, block, stone and historical restoration. Produced under strict manufacturing standards, SPEC MIX quality mortars deliver optimal compressive and tensile bond strengths.

COMPOSITION & MATERIALS

SPEC MIX products are manufactured with the finest available raw materials, meeting the requirements of ASTM C144, C207, C150, C595, C1329 and C91. The final product is certified to meet the requirements of ASTM C270.

SPEC MIX products are manufactured locally across the United States and Canada by licensed manufacturers who use specialized blending equipment and follow strict quality control procedures to meet project specifications, contractor expectations and applicable ASTM standards. Test reports and additional product information from each licensed manufacturer are available upon request. SPEC MIX mortar mix designs are proprietary information.

Colored Mortar

SPEC MIX uses the strongest and most stable pigments available. Colors, produced from high quality pigments made of finely milled synthetic iron oxides, are limeproof, sunfast, inert, stable and meet or exceed ASTM C979 criteria.

In order to consistently achieve the desired mortar color, SPEC MIX incorporates pigment into the mortar during the factory blending process. Components of the finished product, including the pigments, are individually weighed and are then blended and packaged dry to ensure the colored mortar is consistent from batch to batch. This is the optimal means for quality control since the product is environmentally safe and requires no field measuring. Mix times for SPEC MIX colored mortars are 4 - 5 minutes.

SIZES

SPEC MIX masonry mortars and colored mortars are available in 80 lb or 94 lb (36 kg and 43 kg) packages for easy hand loading. For increased jobsite efficiency and safety, they are also offered in 3000 lb (1362 kg) bulk bags for use with any SPEC MIX material delivery system.



Patented Mortar Delivery System

COLORS

SPEC MIX colored masonry mortars cover the full range of the color spectrum - brown, buff, tan, black, yellow, orange, red and white. Each color is custom matched and handled on an individual basis to meet the architect's expectations.

BENEFITS

- A computer batching process and strict quality control procedures help ensure that the finished product complies to design and specification requirements
- Dried sands eliminate the bulking effect associated with varying degrees of moisture within the aggregate, helping to maintain batch-to-batch consistency
- Portable SPEC MIX silos are available to permit construction in all climates
- Pallets and bulk bag containers are completely reusable and are retrieved when a new load of material is delivered to a site
- Preblended product eliminates shoveling and heavy lifting associated with field mixing

LIMITATIONS

- For best results, mortar type should be correlated with the specific masonry unit to be used
- Bond strength, workability and water retention should be given principal consideration when selecting mortar
- Retempering colored mortar is not recommended
- Colored mortar should be discarded after 2 1/2 hours from the time of initial mixing



Consistent custom colored mortar, every time



Computerized batching for quality assurance

Physical properties of field sample mortars should not be used to determine compliance with ASTM C270, which is intended as criteria to determine the acceptance or rejection of the mortar

ENVIRONMENTAL CONSIDERATIONS

Most SPEC MIX products are produced with local raw materials that are extracted within 500 miles of the jobsite and meet their respective ASTM standards. Only specially-ordered raw materials can be sourced greater than 500 miles from the project jobsite. Empty bags and wooden pallets are returned to the plant for reuse, reducing landfill impact. SPEC MIX products may contain recycled materials. Use of SPEC MIX products can contribute points toward LEED® project certification.

4. Technical Data

APPLICABLE STANDARDS

American Concrete Institute (ACI) - ACI 530.1 Building Code Requirements and Specification for Masonry Structures and Related Commentaries

ASTM International

- ASTM C91 Standard Specification for Masonry Cement
- ASTM C144 Standard Specification for Aggregate for Masonry Mortar
- 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 C476 Standard Specification for Grout for Masonry
- 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 C1093 Standard for Accreditation for testing agencies for unit masonry
- ASTM C1157 Standard Performance Specification for Hydraulic Cement
- ASTM C1329 Standard Specification for Mortar Cement
- ASTM C1714 Standard Specification for Preblended Dry Mortar Mix for Unit Masonry

International Masonry Industry All-Weather Council (IMIAC) - Recommended Practices and Guide Specification for Hot and Cold Weather Masonry Construction

Notes

- Test method C780 is acceptable for preconstruction and construction evaluation of mortars for plain and reinforced unit masonry
- There is no ASTM method for determining the conformance or nonconformance of a field prepared mortar to the property specification of ASTM C270
- Compressive strength values resulting from field tested mortars do not represent the compressive strength of mortar as tested in the laboratory or of the mortar in the wall.

5. Installation

PREPARATORY WORK

Deliver products in manufacturer's original, unopened, undamaged containers, with identification labels intact. SPEC MIX products are custom packaged to meet specification requirements. Handle and store products according to SPEC MIX recommendations. Keep dry, covered and protected from the weather and other environmental hazards that could cause damage. When stored and protected as recommended, SPEC MIX products have a 9 month shelf life.

Verify that site conditions are acceptable for installation. Do not proceed with installation until unacceptable conditions are corrected.

The mortar type should correlate to the particular masonry unit to be used, as certain





Aesthetic and structural performance, every project

mortars are compatible with certain masonry units. The specifier should evaluate the interaction of the mortar type and masonry unit specified. Masonry units with a high initial rate of absorption will have greater compatibility with mortar of high water retention.

The material properties that influence the structural performance of masonry are compressive strength, bond strength and elasticity. Since the compressive strength of masonry mortar is of less importance than bond strength, workability and water retentivity, the latter properties should be given priority in mortar selection.

Mortar selection should be based on design requirements and with due consideration given to the code and specification provisions affected by the mortar selected.

Mock-ups

A sample of the proposed product will be provided by the manufacturer for onsite preparation of a sample panel for architectural approval and testing, if required. Preparation of this panel with all materials and systems that will be employed in the final project is imperative. Retain the mock-up or field sample through the completion of the project.

METHODS

A mechanical mortar mixer is required for mixing to ensure homogeneity. Add the mortar mix to the maximum amount of clean, potable water, consistent with optimum

workability. Mixing times are 4 - 5 minutes and should be consistent from batch to batch. Rinse out mixer following each batch when changing products.

Bag Mixing - 80 lb and 94 lb (36 kg and 43 kg) bags

- Use 1.5 - 2.0 gal (5.7 - 7.6 L) of potable water per bag
- Place 75% of the water into a mechanical mixer
- Dispense one 80 lb (36 kg) bag or one 94 lb (43 kg) bag into the mixer and allow 4 minutes of mix time
- Add remaining water for desired consistency
- Let product mix for at least 1 additional minute

Silo Mixing

- Place 75% of the needed water into the mixer. A double batch requires approximately four full 5 gal (18.9 L) pails
- Open silo handle to dispense SPEC MIX product
- Add remaining water until desired consistency is reached
- Mix material for 5 minutes
- When the project is complete, contact the SPEC MIX distributor to retrieve the silo and reusable bags

Mix times and procedures should be consistent from batch to batch.

PRECAUTIONS

Usage

- Use of a batch type mixer and a mixing time

- of 4 - 5 minutes is required for best results
- The finished color should not be analyzed until after 7 days and after specified cleaning procedures have been followed consistent with the mock-up panel
- Uniform color requires consistent material proportioning
- Maintain uniform mix times and water addition rates
- Tool mortar joints when surface is thumb-print hard and keep tooling time consistent
- Do not strike joints too early or too late, as the color will not remain consistent with the mock-up panel
- Retempering colored mortar by adding additional water is not recommended
- Hand mixing of the mortar should be permitted only with the written approval of the specifier, who should outline hand-mixing procedures
- Mortar should be cured a minimum of 28 days
- When using water in the cleaning procedures, use potable water only
- Do not clean colored mortar with muriatic acid

Safety

This product contains greater than 0.1% crystalline silica. Avoid breathing dust; use a NIOSH-approved dust respirator and use only with adequate ventilation to keep dust below permissible levels. The product also contains cementitious materials injurious to eyes. Contact with freshly mixed product can cause severe burns. Avoid eye contact or prolonged



contact with skin. Wash thoroughly after handling. In case of eye contact, flush with plenty of water for 15 minutes. Consult a physician. Keep out of the reach of children.

BUILDING CODES

Current data concerning building code requirements and product compliance may be obtained from SPEC MIX technical support specialists. Installation and use of SPEC MIX products must comply with the requirements of applicable local, state and national code jurisdictions.

6. Availability & Cost

AVAILABILITY

SPEC MIX products are produced locally across the United States and Canada by licensed manufacturers who use high tech blending equipment and follow strict quality control procedures to meet project specifications, contractor expectations and applicable ASTM standards. SPEC MIX Masonry Mortars and SPEC MIX silo delivery systems are available through a network of nationally licensed manufacturers, with local distribution to every major U.S. market and select regions of Canada. Contact SPEC MIX, Inc., for more information, or visit the www.specmix.com website to locate a local manufacturer.

COST

Market pricing and installed cost information may be obtained from a local SPEC MIX manufacturer or through SPEC MIX, Inc., by calling 888-773-2649.

7. Warranty

SPEC MIX LIMITED PRODUCT WARRANTY: SPEC MIX, Inc. warrants this product to be of merchantable quality when used or applied in accordance with the instructions. This product is not warranted as suitable for any purpose or use other than the general purpose for which it is intended. Liability under this warranty is LIMITED to the replacement of the product (as purchased) if found to be defective or, at the shipping companies' option, to the refund of the purchase price. All claims under this warranty must be written and submitted to SPEC MIX, Inc.

8. Maintenance

Properly mixed and installed masonry units and mortar require little maintenance. Depending on service conditions, masonry walls may require periodic cleaning and

tuck-pointing. Clean masonry with potable water only. Do not use muriatic acid to clean colored mortar.

9. Technical Services

SPEC MIX is produced under strict manufacturing standards, and complete quality control is in effect with each batch. A digital printout displaying the proper proportions per batch may be kept as a permanent record and produced if requested. Only SPEC MIX offers this lab controlled production system for preblended masonry materials on a national basis. Contact SPEC MIX, Inc., or the local SPEC MIX manufacturer for information.

10. Filing Systems

- SmartBuilding Index
- MANU-SPEC®
- Additional product information is available from the manufacturer upon request.