



04 DIVISION
MORTAR

MASONRY CEMENT & SAND MASONRY MORTAR (M, S, N)



Great Workability. Increased Productivity

SPEC MIX® Masonry Cement & Sand mortar is a dry preblended mortar mix containing masonry cement and dried masonry sand formulated for superior bond, water retention and board life. SPEC MIX Masonry Cement & Sand mortar is available in color and is engineered for the installation of CMU, and brick applications where high mortar workability and board life is required for good bond. It comes in Types M, S and N, and each designation meets ASTM C 270, ASTM C 1714, and CSA A179 requirements. In addition to custom mix designs that are available for specific applications or properties, the standard Masonry Cement & Sand mortar is designed to be compatible with the characteristics of the specified masonry unit. It is acceptable for all types of masonry construction, below or above grade.

SPEC MIX Masonry Cement & Sand mortar is produced under strict manufacturing standards, and complete quality control measures are implemented with each batch. A digital printout displaying the proper proportions per batch may be kept as a permanent record. Submittals are available upon request for certification to applicable ASTM, TMS, and CSA standards.

TYPICAL MATERIALS

MASONRY CEMENT
SAND
PIGMENT



TYPE M (MC-02)
TYPE S (MC-03)
TYPE N (MC-04)
COLOR (MC-05)

AVAILABLE
IN COLOR





MASONRY CEMENT & SAND MASONRY

INSTALLATION/APPLICATION

Mortar type should correlate with the particular masonry unit to be used. The specifier should evaluate the interaction of the mortar type and masonry unit specified. That is, masonry units having a high initial rate of absorption will have greater compatibility with mortar that has a high water retentivity. The material properties of mortar that influence the structural performance of masonry are compressive strength, bond strength and elasticity. Because the compressive strength of masonry mortar is generally less important than bond strength, workability and water retentivity, the latter properties should be given principal consideration in mortar selection. Select mortar based on the design requirements and with consideration of code and specification provisions affected by the mortar.

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

Allow mortar to cure a minimum of 7 days but no more than 28 days before cleaning. Consult manufacturer of the masonry units and cleaning chemicals for further instructions to ensure proper washing procedures.

Clean masonry only with a national proprietary cleaning agent (following the manufacturer's instructions) or potable water. SPEC MIX products must be kept dry, covered and protected from weather and other damage.

SIZES AND EQUIPMENT

SPEC MIX Masonry Cement & Sand Mortar is available in 80 lb (36.2 kg) packages for easy hand loading or in 3,000 lb (1,360.7 kg) reusable bulk bags to be used with the various SPEC MIX silo systems. When using the silo system, once the bulk bags of mortar are delivered to the project site, the portable silo is loaded with a jobsite forklift and the product is dispensed into a mechanical batch mixer.

MIXING INSTRUCTIONS

WEAR IMPERVIOUS GLOVES, such as nitrile.

- Mixing is best accomplished by using a mechanical mixer to ensure optimal workability and performance.
- Use clean, potable water; add the amount of water consistent with optimum workability which provides adequate water to satisfy the initial rate of absorption of the masonry units.
- Mixing times are four to five minutes when using a mechanical batch mixer and should be

ASTM C 270 PROPERTY SPECIFICATIONS (laboratory prepared)

Type	Average Compressive Strength at 28 Days, Minimum, PSI	Water Retention, Minimum %	Air Content Maximum %
M	2,500 PSI	75	18
S	1,800 PSI	75	18
N	750 PSI	75	20*

*When structural reinforcement is incorporated in masonry cement mortar, the maximum air content shall be 18%

CSA A179 PROPERTY SPECIFICATIONS (laboratory prepared)

Type	Minimum Compressive Strength at 28 days, MPa	Water Retention, Minimum %	Air Content Maximum %
M	17.5 MPa	70	18
S	12.5 MPa	70	18
N	5 MPa	70	18

ESTIMATED YIELDS

	80 lb (36.2 kg) Bags	3,000 lb (1,360.7 kg) Bulk Bags
4 in (100 mm) Block	15 to 17	560 to 635
6 in (150 mm) Block	12 to 14	450 to 525
8 in (200 mm) Block	11 to 13	410 to 485
10 in (250 mm) Block	11 to 13	410 to 485
12 in (300 mm) Block	10 to 12	375 to 450
Modular Brick	39 to 41	1,460 to 1,535
Queen Sized Brick	33 to 35	1,235 to 1,310
King Sized Brick	26 to 28	975 to 1,050
Utility Brick	23 to 25	860 to 935



Note: The yields given above are approximate and depend on labor practices, site conditions and design of work. Yields include typical waste. Some areas such as FL, CA, OR, and WA experience higher yields due to construction practices. Please contact your local representative for more specific yield information in your area.

- held consistent from batch to batch.
- Maintain the same mixing procedures to maintain consistency throughout the project.
 - Tool mortar joints when the surface is thumb-print hard. Keep tooling times consistent.
 - Hand mix mortar only with written approval by the specifier who should outline procedures.
 - Use mortar within 2.5 hours after initial mixing.
 - Retemper mortar only when mixing water is lost due to evaporation.
 - Whenever possible, do not retemper colored SPEC MIX masonry mortars by adding additional water; retempering may affect color consistency.

LIMITATIONS

SPEC MIX Masonry Cement & Sand Mortar should be installed in accordance with the provisions of the local building code and applicable ASTM, TMS, and CSA standards. Good workmanship coupled with proper detailing and design assures durable, functional, watertight construction. Follow proper cold-weather and hot-weather masonry procedures at temperatures below 40 °F (4 °C) or above 100 °F (38 °C) respectively.

LIMITED WARRANTY

IN THE UNITED STATES

NOTICE: Obtain the applicable LIMITED WARRANTY at www.specmix.com/product-warranty or send a written request to SPEC MIX, LLC, Five Concourse Parkway, Atlanta, GA 30328, USA.

AVISO: Obtenga la GARANTÍA LIMITADA correspondiente en www.specmix.com/product-warranty o envíe una solicitud por escrito a SPEC MIX, LLC, Five Concourse Parkway, Atlanta, GA 30328, USA.

IN CANADA

NOTICE: Obtain the applicable LIMITED WARRANTY at www.specmix.com/product-warranty or send a written request to SPEC MIX, LLC, Five Concourse Parkway, Atlanta, GA 30328, USA.

AVIS: Obtenez la GARANTIE LIMITÉE applicable sur www.specmix.com/produit-garantie. Ou envoyez une demande écrite à SPEC MIX, LLC, Five Concourse Parkway, Atlanta, GA 30328, USA.

TECHNICAL SUPPORT

- CONTACT YOUR LOCAL SPEC MIX® MANUFACTURER
- VISIT WWW.SPECMIX.COM
- CONTACT SPEC MIX®
PHONE: 888-733-2649 FAX: 651-454-5315



Product Certification Letter

March 6, 2020

Product Description: 80 lb. / 3000 lb. SPEC MIX® Masonry Cement & Sand Mortar / Type S
Item Number: 19004 / SM19004
Manufacturing Plant: QUIKRETE® - Wisconsin

To: Whom It May Concern

This letter certifies that SPEC MIX Masonry Cement & Sand Mortar / Type S as referenced above meets the requirements of ASTM C 1714 and the *property* specifications for an ASTM C 270, *Standard Specification for Mortar for Unit Masonry*, Type S Mortar.

The raw materials used in this product formulation meeting the standard specifications include: Masonry Cement Type S meeting ASTM C 91, *Standard Specification for Masonry Cement*, and Mason Sand meeting ASTM C 144, *Standard Specification for Aggregate for Masonry Mortar*.

It is available as a standard gray, as well as in a variety of standard and custom colors. For custom colors, or versions with integral water repellent, the finished product item number will vary from the base design item number above depending upon the integral water repellent and / or specific pigment. These versions will also meet the specifications described above.

Mortar property characteristics including compressive strength are specified according to ASTM C 270 with laboratory testing. ASTM C 270 (property specification) is not for use to specify minimum compressive strengths to be achieved by field mixed mortars. Field mixed mortar may be tested according to ASTM C 780 to evaluate mortar properties such as mortar water content or consistency. As defined in ASTM C 1586, compressive strength values determined through ASTM C 780 in the field are **not expected nor required** to achieve the compressive strengths of laboratory tested ASTM C 270 specification mortars.

We are pleased to be of service to you. If you have any questions, please let us know.

A handwritten signature in black ink that reads "Wendy Henry". The signature is written in a cursive style and is positioned above a horizontal line.

Wendy Henry
Quality Assurance Manager

WMH: TD

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