



04 DIVISION  
MORTAR

# PORTLAND LIME & SAND MASONRY MORTAR



## Great Workability. Increased Productivity.

SPEC MIX® Portland Lime & Sand Mortar is a dry preblended mortar mix containing portland cement, hydrated lime and dried masonry sand formulated for superior bond, water retention and board life. Available in Types M, S and N, each meets ASTM C 270, ASTM C 1714 and CSA A179 requirements. SPEC MIX Portland Lime & Sand is available in standard or custom colors. In addition to custom mix designs that are available for specific applications or properties, the standard Portland Lime & Sand Mortar is designed to be compatible with the characteristics of the specified masonry unit. It is acceptable for all types of masonry construction.

SPEC MIX Portland Lime & Sand 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

PORTLAND CEMENT  
HYDRATED LIME  
SAND  
PIGMENT



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

AVAILABLE  
IN COLOR



## PORTLAND LIME & SAND MASONRY MORTAR

### 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 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 Portland Lime & 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. (See silo operations manual.)

### 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	75	12
S	1,800	75	12
N	750	75	14*

\* When structural reinforcement is incorporated in cement-lime mortar, the maximum air content shall be 12%

### CSA A179 PROPERTY SPECIFICATIONS (laboratory prepared)

Type	Minimum compressive strength at 28 days, MPa	Water retention, minimum %	Air content, maximum %
M	17.5	70	18
S	12.5	70	18
N	5	70	18

### ESTIMATED YIELDS

	80 lb (36.2 kg) bags	3,000 lb (1,360.7 kg) bags
4 in Block	14 to 16	525 to 600
6 in Block	11 to 13	410 to 485
8 in Block	10 to 12	375 to 450
10 in Block	10 to 12	375 to 450
12 in Block	9 to 11	335 to 410
Modular Brick	37 to 39	1,385 to 1,460
Queen Sized Brick	31 to 33	1,160 to 1,235
King Sized Brick	25 to 27	935 to 1,010
Utility Brick	22 to 24	825 to 900



**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 Portland Lime & 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](http://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](http://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](http://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](http://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](http://WWW.SPECMIX.COM)
- CONTACT SPEC MIX®  
PHONE: 888-733-2649 FAX: 651-454-5315



## Product Certification Letter

February 1, 2021

**Product Description:** 80 lb / 3000 lb SPEC MIX® PL-03 Portland Lime & Sand Mortar / Type S  
**Item Number:** 19007 / SM19007

To: Whom It May Concern

This letter certifies that SPEC MIX® PL-03 Portland Lime & Sand Mortar / Type S meets the requirements of ASTM C1714, *Standard Specification for Preblended Dry Mortar Mix for Unit Masonry*, and the *property specifications for an ASTM C270, Standard Specification for Mortar for Unit Masonry, Type S Mortar*.

The raw materials used in this product formulation meeting the standard specifications may include: Portland Cement meeting ASTM C150, *Standard Specification for Portland Cement*, Blended Cement meeting ASTM C595, *Standard Specification for Blended Hydraulic Cement*, Hydrated Lime meeting ASTM C207, *Standard Specification for Hydrated Lime for Masonry Purposes*, Mason Sand meeting ASTM C144, *Standard Specification for Aggregate for Masonry Mortar*, Fly Ash meeting ASTM C618, *Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for use in Concrete*, Easy-Spred®, which is recognized as an acceptable lime alternate in masonry mortar by ICC Evaluation Services, ICC-ES Report No. 2027, and a proprietary admixture.

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 C270 with laboratory testing. ASTM C270 (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 C780 to evaluate mortar properties such as mortar water content or consistency. As defined in ASTM C1586, compressive strength values determined through ASTM C780 in the field are **not expected nor required** to achieve the compressive strengths of laboratory tested ASTM C270 specification mortars.

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

Certified by:

THE QUIKRETE® COMPANIES, LLC  
Technical and Engineering Center  
500 Marathon Parkway  
Lawrenceville, GA 30046  
770.216.9580 • www.quikrete.com  
651.994.7120 • www.specmix.com



## Material Test Report

**Product Description:** SPEC MIX® PL-03 Portland Lime & Sand Mortar / Type S  
**Item Number:** 19007 / SM19007  
**Manufacturing Plant:** QUIKRETE® - Memphis

### Sample Identification

### Initial Testing

Test Completed:	6/25/2020	Test	Specification	Result
Lab Code:	20-0875	Water (%)	As required	15.9
		Consistency (%)	105 - 115 @25d	106
		Unit Weight (lb/cu ft)	1	130.1

### Strength Testing

Test	Compressive Strength (PSI)	
Age	Specification	Result
7 day	1	2590
28 day	1800	3080

### Other Testing

Test	Specification	Result
Water Retention (%)	>= 75	84.9

(1) A value of 1 indicates that the property is being measured but no minimum value has been set

### Certified by:

THE QUIKRETE® COMPANIES, LLC  
Technical and Engineering Center  
500 Marathon Parkway  
Lawrenceville, GA 30046  
770.216.9580 • www.quikrete.com  
651.994.7120 • www.specmix.com