



Lafarge Mortar Cement Types N, S and M

LAFARGE

Lafarge Mortar Cement provides excellent workability, reduces permeability, improves bond strength and features the advantage of uniform proportioning associated with mortar cements.

Product Description

Basic Use: Lafarge Types N, S and M Mortar Cement meet ASTM C 1329, IBC 2103.7, and UBC 21-14 Standards for Mortar Cement and are used to make Type N, S and M masonry mortars as defined in ASTM C 270. When mixed with 2 to 3 parts loose, damp masonry sand meeting the requirements of ASTM C 144 and potable water, Lafarge Mortar Cement produces mortar with flexural strengths meeting the requirements of ASTM C1329.

The following table is a suggested guide for the selection of mortar type; however, other considerations, such as climate, exposure, type of masonry unit, applicable building codes and engineering requirements should also be considered.

Suggested Guide for Selection of Mortar Type

Location	Building Segment	Mortar Type	
		Recommended	Alternative
Exterior, above grade	load-bearing wall	S	
	parapet wall	S	
	non-load-bearing wall	N	S
Exterior, at or below grade	foundation walls, retaining walls, manholes, sewers, pavements, walls, patios	S ¹	M
		M	
Interior	load-bearing wall	S	
	non-load-bearing partitions	N	S

¹ Masonry exposed to weather in a nominally horizontal surface is extremely vulnerable to weathering. Mortar for such masonry should be selected with due caution.





LAFARGE MORTAR CEMENT TYPES N, S AND M

Composition and Materials: Lafarge Mortar Cement is composed of portland cement, plasticizers, and air entraining additives. These components are proportioned at the cement plant under controlled conditions to assure uniformity of performance.

Size: Type N available in 70-pound bags, Type S available in 75-pound bags. Type M available in 80-pound bags.

Limitations: Lafarge Mortar Cement should be mixed with clean, damp, loose masons' sand and potable water. The use of admixtures in masonry construction should have prior approval by the specifier, comply with ASTM C 1384, and be tested in the mortar at the temperature extremes anticipated at the job site. Insufficient mixing and improper sand contents can reduce the quality of the masonry mortar. Overloading a mixer will reduce masonry mortar quality regardless of length of mixing. See mixing instructions printed on bag.

Technical Data

Lafarge Mortar Cement is suitable for all masonry construction, especially projects that require higher flexural bond and compressive strengths.

Applicable standards: Lafarge Mortar Cement conforms to the requirements of International Building Code Section 2103.7, Chapter 21-14 of the Uniform Building Code and ASTM C 270: The Standard Specifications for Mortar for Unit Masonry. When mixed with sand meeting the requirements of ASTM C 144: Standard

Specification for Aggregate for Masonry Mortar and an appropriate amount of water, Lafarge Types N, S and M Mortar Cement will result in Type N, S and M Mortar (respectively) meeting the requirements of IBC 2103.7(2), UBC 21-15, ASTM C 1329, and ASTM C 270. A certificate attesting to this will be furnished by the manufacturer upon request.

Mixing: Place 2/3 of the required mixing water and half of the sand in the mixer. Next, add the Mortar Cement and then add the remaining sand. Mix for two minutes to permit the fluidizing of the ingredients to become effective. Next, add the remaining water to obtain the desired workability. Five minutes of mixing is recommended after all ingredients are in the mixer. At no time should the amount of material in the mixer cover the mixer blades when they are at the top of their travel.

Retempering: Mortars shall be retempered as needed to restore workability. Unused mortar shall be discarded after two hours.

Tooling of Joints: Tooling of masonry mortar joints increases the density, durability, and water resistance of the mortar. Tooling also increases the bond between the masonry mortar and the masonry unit. The moisture content of the masonry mortar at the time of tooling will affect final masonry mortar color. Delayed tooling normally results in darker mortar joints while early tooling will cause lighter joints.

Product Name

Lafarge Mortar Cement
Types N, S, and M

Manufacturer

Lafarge North America Inc.
12950 Worldgate Drive, Suite 500
Herndon, Virginia 20170
www.lafargenorthamerica.com

Precautions

Direct contact with wet cement should be avoided. If contact occurs, the skin should be washed with water as soon as possible. Exposure can cause serious, potentially irreversible tissue destruction in the form of chemical (caustic) burns. If cement gets into the eyes, immediately rinse thoroughly with water and seek medical attention. For more information, reference the applicable Lafarge Material Safety Data Sheet (MSDS). The MSDS should be consulted prior to use of this product and is available upon request and online at
www.lafargenorthamerica.com.

Contact your Lafarge Regional Office for specific product information, availability and ordering.

Great Lakes Region

Bingham Farms, Michigan
Phone: 248-594-1991 Fax: 248-594-4471

Northeast Region

Montréal, Québec
Phone: 514-861-1411 Fax: 514-861-6917

River Region

Lee's Summit, Missouri
Phone: 816-251-2100 Fax: 816-347-1884

Southeast Region

Alpharetta, Georgia
Phone: 678-746-2000 Fax: 678-746-2007

Western Region

Calgary, Alberta
Phone: 403-271-9110 Fax: 403-278-2738

Physical Requirements for Mortar Cement

(UBC Table No. 21-14A)

	Type N (kPa)	Type S (kPa)	Type M (kPa)
Flexural Bond Strength	71 (489 kPa)	104 (717 kPa)	116 (799 kPa)
Air Content of Mortar:			
Minimum % by volume	8	8	8
Maximum % by volume	16	14	14
Lafarge Mortar Cement:			
Air content (as per ASTM C 270) (maximum % by volume)	12	12	12

Property Requirements for Mortar¹

Based Upon IBC 2103.7(2), UBC 21-15A and ASTM. C 270, Table 2

Mortar	Type	Average Compressive Strength at 28 Days Min.		Water Retention (Min. %)	Air Content (Max. %) ²
		(Min. Psi)	(MPa)		
Cement-	M	2500	(17.2)	75	12
Lime or	S	1800	(12.4)	75	12
Mortar	N	750	(5.2)	75	14 ³
Cement	O	350	(2.4)	75	14 ³

¹ Laboratory-prepared mortar only.

² Determined in accordance with applicable standards.

³ When structural reinforcement is incorporated in the above noted mortars, the maximum air content shall be 12 percent.

Limited Warranty

Lafarge warrants that Lafarge Mortar Cement meets the requirements of ASTM C 1329, IBC 2103.7, and UBC 21-14. Lafarge makes no other warranty, whether of merchantability or fitness for a particular purpose, with respect to Lafarge Mortar Cement. Having no control over its use, Lafarge will not guarantee finished work in which Lafarge Mortar Cement is used.