

**SECTION 04 05 13
MASONRY MORTARING**

PART 1 - GENERAL

1.1 DESCRIPTION:

Section specifies mortar materials and mixes.

1.2 RELATED WORK:

- A. Mortar used in Section:
1. Section 04 05 16, MASONRY GROUTING.
 2. Section 04 20 00, UNIT MASONRY.

1.3 TESTING LABORATORY-CONTRACTOR RETAINED: NA

1.4 TESTS: NA

1.5 SUBMITTALS

- A. Submit in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.
- B. Manufacturer's Literature and Data:
1. Cement, each kind.
 2. Hydrated lime.
 3. Admixtures.
 4. Liquid acrylic resin.

1.6 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Deliver masonry materials in original sealed containers marked with name of manufacturer and identification of contents.
- B. Store masonry materials under waterproof covers on planking clear of ground, and protect damage from handling, dirt, stain, water and wind.

1.7 APPLICABLE PUBLICATIONS

- A. Publications listed below form a part of specification to extent referenced. Publications are referenced in text by basic designation only.
- B. American Society for Testing and Materials (ASTM):
- C91-05 Masonry Cement
- C144-04 Aggregate for Masonry Mortar
- C150-05 Portland Cement
- C207-06 Hydrated Lime for Masonry Purposes
- C270-07 Mortar for Unit Masonry
- C321-00/R05..... Bond Strength of Chemical-Resistant Mortars

C348-02	Flexural Strength of Hydraulic Cement Mortars
C595-08	Blended Hydraulic Cement
C780-07	Preconstruction and Construction Evaluation of Mortars for Plain and Reinforced Unit Masonry
C979-05	Pigments for Integrally Colored Concrete
C1329-05	Mortar Cement

PART 2 - PRODUCTS

2.1 HYDRATED LIME

ASTM C207, Type S.

2.2 AGGREGATE FOR MASONRY MORTAR

- A. ASTM C144 and as follows:
 - 1. Light colored sand for mortar for laying face brick.
- B. Test sand for color value in accordance with ASTM C40. Sand producing color darker than specified standard is unacceptable.

2.3 BLENDED HYDRAULIC CEMENT: NA

2.4 MASONRY CEMENT

- A. ASTM C91. Type N, S, or M.

2.5 MORTAR CEMENT

ASTM C1329, Type N, S or M.

2.6 PORTLAND CEMENT

- A. ASTM C150, Type I.

2.7 LIQUID ACRYLIC RESIN: NA

2.8 WATER

Potable, free of substances that are detrimental to mortar, masonry, and metal.

2.9 POINTING MORTAR: NA

2.10 MASONRY MORTAR

- A. Conform to ASTM C270.
- B. Admixtures:
 - 1. Do not use mortar admixtures and color admixtures unless approved by Resident Engineer.
 - 3. Do not use antifreeze compounds.

2.11 HIGH BOND MORTAR: NA

2.12 COLOR ADMIXTURE: NA**PART 3 - EXECUTION****3.1 MIXING**

- A. Mix in a mechanically operated mortar mixer.
 - 1. Mix mortar for at least three minutes but not more than five minutes.
- B. Measure ingredients by volume. Measure by the use of a container of known capacity.
- C. Mix water with dry ingredients in sufficient amount to provide a workable mixture which will adhere to vertical surfaces of masonry units.
- D. Mortar that has stiffened because of loss of water through evaporations:
 - 1. Re-tempered by adding water to restore to proper consistency and workability.
 - 2. Discard mortar that has reached its initial set or has not been used within two hours.
- E. Pointing Mortar:
 - 1. Mix dry ingredients with enough water to produce a damp mixture of workable consistency which will retain its shape when formed into a ball.
 - 2. Allow mortar to stand in dampened condition for one to 1-1/2 hours.
 - 3. Add water to bring mortar to a workable consistency prior to application. //

3.2 MORTAR USE LOCATION

- A. For brick veneer over frame back up walls, use Type N portland cement-lime mortar or Type S masonry cement or mortar cement mortar.
- B. Use Type N mortar for other masonry work, except as otherwise specified.

--- E N D ---