

**SECTION 04100
MORTAR AND GROUT**

PART 1 - GENERAL

1.1 SUMMARY:

A. Section Includes:

1. Mortar for Unit Masonry.
2. Mortar for Stone.
3. Grout for Unit Masonry.

B. Related Sections:

1. Section 01400 - Quality Control: Testing.
2. Section 04150 - Masonry: Reinforcement and accessories.
3. Section 04200 - Unit Masonry: Block and brick.
4. Section 04400 - Stone.

1.2 SUBMITTALS:

- A. Samples:** Submit colored mortar samples and provide coloring for masonry sample wall mock-up.
- B. Grout Mix Design:** Prior to any masonry work, submit grout mix design in accordance with Section 01400.
- C. Test Reports:** Reports of tests shall be distributed in accordance with Section 01400. Submit mortar and grout tests for proposed materials and mixes in accordance with code requirements.

LEED MRc4: Recycled Content

Provide a statement from the manufacturer including recycled content percentage, by weight, and whether the recycled content is post-industrial or post-consumer.

MRc5: Regional Materials

Provide a statement from the manufacturer stating the materials provided were manufactured within 500 miles of the project. Indicate location.

1.3 QUALITY ASSURANCE:

- A. Testing Agency:** Testing will be conducted by an approved testing laboratory engaged by the Owner.
- B. Sole Source Requirements:** Obtain mortar materials from one manufacturer or source for each type of masonry for the project.

PART 2 - PRODUCTS

2.1 MATERIALS:

A. Portland Cement for Unit Masonry: ASTM C150, Type I, except Type III may be used for cold weather construction.

1. Do not use masonry cement.

2. Colored Mortar For Brick and Block: Provide natural color or white cement as required to produce the desired color.

COLORED MORTAR FOR BRICK AND BLOCK IS OPTIONAL.

3. Stone Work Mortar: Provide non-staining portland cement complying with the non-staining requirements of ASTM C91 for not more than 0.03% water soluble alkali.

4. Stone Mortar Color: One pound dark buff mortar color per sack of portland cement.

B. Hydrated Lime: ASTM C207, Type S.

COLORED STONE MORTAR IS A REQUIREMENT.

C. Aggregates for Mortar: ASTM C144.

D. Aggregates for Grout: ASTM C404, size 1 for fine aggregate, size 8 or 89 for course.

E. Water: Clean and free from deleterious amounts of acids, alkalies or organic materials which could cause efflorescence or other impurities affecting strength or appearance.

F. Mortar Color For Brick and Block: Pre-packaged, factory mixed mineral oxide pigments.

BRICK AND BLOCK MORTAR COLOR IS OPTIONAL.

1. Color:

- a. As selected by Architect.
- b. Match existing at patching of existing work.

A NEW COLOR OF MORTAR MAY BE ACCEPTABLE AT ADDITIONS WHERE MATCHING OF AN EXISTING COLOR IS DETERMINED TO BE TOO DIFFICULT.

G. Other Admixtures:

1. Antifreeze Compounds: Calcium chloride or other antifreeze agents not allowed.

2. The use of accelerators not allowed.

3. Latex Additive for Stone Work: Manufacturer's standard acrylic type, but not containing a retarder.

LEED MRc4: Recycled Content
100% post-industrial fly ash

2.2 MIXES:

A. Mortar Materials and Proportions: Comply with ASTM C270.

B. Unit Masonry Setting Mortar:

1. Type S for Load-Bearing Masonry if deemed necessary by the designer: Containing Type I Portland cement, hydrated lime and aggregate. 1800 psi average compressive strength in 28 days.
2. Type N for Face Brick and Non-Load-Bearing Interior CMU: Containing Type I Portland cement, hydrated lime and aggregate. 750 psi average compressive strength in 28 days.

1. Provide colored mortar to match accepted samples at face brick.

B. Non-Staining Stone Setting Mortar:

1. Complying with ASTM C270, Type S, with three parts sand to 1 part portland cement to 1/2 part hydrated lime.
2. Add 1 pound of dark buff colored pigment to each sack of cement.
3. Add latex additive per manufacturer's instructions.

DELETE COLORED MORTAR AT FACE BRICK IF NOT REQUIRED, OR APPROPRIATE TO MATCH EXISTING CONDITION. CONFIRM WITH CAMPUS ARCHITECT.

PART 3 - EXECUTION

3.1 FIELD QUALITY CONTROL:

A. Not used

END OF SECTION 04100