

SECTION 04100

MORTAR

I. PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Mortar and grout for masonry.

1.2 RELATED WORK

- A. Section 04300 - Unit Masonry System: Installation of mortar and grout.

1.3 REFERENCES

- A. ASTM C91 - Masonry Cement.
- B. ASTM C144 - Aggregate for Masonry Mortar.
- C. ASTM C150 - Portland Cement.
- D. ASTM C207 - Hydrated Lime for Masonry Purposes.
- E. ASTM C270 - Mortar for Unit Masonry.
- F. ASTM C387 - Packaged, Dry, Combined Materials, for Mortar and Concrete.
- G. ASTM C404 - Aggregates for Masonry Grout.
- H. ASTM C476 - Grout for Masonry.
- I. ASTM C1019 - Method of Sampling and Testing Grout.
- J. IMIAC - International Masonry Industry All-Weather Council: Recommended Practices and Guide Specifications for Cold Weather Masonry Construction.

1.4 SUBMITTALS

- A. Include design mix, indicate Proportion or Property Method used, required environmental conditions, and admixture limitations.
- B. Submit test reports on grout indicating conformance to ASTM C476.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Deliver products to site, store and protect per manufacturer's recommendations.
- B. Maintain packaged materials clean, dry, and protected against dampness, freezing, and foreign matter.

1.6 ENVIRONMENTAL REQUIREMENTS

- A. Maintain materials and surrounding air temperatures to minimum 50 degrees F (10 degrees C) prior to, during, and 48 hours after completion of masonry work.

1.7 MIX TESTS

- A. Test mortar and grout.
- B. Testing of Mortar Mix: In accordance with ASTM C780.
- C. Test mortar mix for compressive strength 1800 psi.
- D. Testing of Grout Mix: In accordance with ASTM C1019.

2. PART 2 PRODUCTS

2.1 MORTAR

- A. Interior Walls - S mortar standard color block.

2.2 MATERIALS

- A. Portland Cement: ASTM C150, Type II, Gray, color.
- B. Masonry Cement: ASTM C91, Type S.
- C. Mortar Aggregate: ASTM C144, standard masonry type.
- D. Grout Aggregate: ASTM C404.

2.3 GROUT FINE AGGREGATE: Masons sand; 70 percent by volume.

- A. Water: Clean and potable.
- B. Bonding Agent: Portland Cement and 1/10 lime.

2.4 MORTAR COLOR

- A. Interior Mortar Color: Standard block color.

2.5 ADMIXTURES

- A. Plasticizer: Water reducing type which reduces porosity and absorption to increase bond strength; grout manufacturer's standard.
- B. Water Repellent: Liquid type; Rheopel manufactured by Master Builders Inc., or equal.

2.6 MORTAR MIXES

- A. Mortar: ASTM C270, Type S using the Property Method.

2.7 MORTAR MIXING

- A. Thoroughly mix mortar ingredients in quantities needed for immediate use in accordance with ASTM C270.
- B. Add mortar color and admixtures in accordance with manufacturer's instructions. Provide uniformity of mix and coloration.
- C. Do not use anti-freeze compounds to lower the freezing point of mortar.
- D. If water is lost by evaporation, retemper only within two hours of mixing.
- E. Use mortar within two hours after mixing at temperatures of 80 degrees F (26 degrees C), or two-and-one-half hours at temperatures under 50 degrees F (10 degrees C).

2.8 GROUT MIXES

- A. Engineered Masonry: 3000 psi strength at 28 days; 7-8 inches slump; mixed in accordance with ASTM C476 Fine grout.

2.9 GROUT MIXING

- A. Thoroughly mix mortar ingredients in quantities needed for immediate use in accordance with ASTM C476 Fine grout.
- B. Add admixtures in accordance with manufacturer's instructions. Provide uniformity of mix.

3. PART 3 EXECUTION

3.1 EXAMINATION

- A. Request inspection of spaces to be grouted.

3.2 PREPARATION

- A. Apply bonding agent to existing surfaces.
- B. Plug cleanout holes with block masonry units to prevent leakage of grout materials. Brace masonry for wet grout pressure.

3.3 INSTALLATION

- A. Install mortar and grout in accordance with manufacturer's instructions.
- B. Do not displace reinforcement while placing grout.
- C. Remove excess mortar.

END OF SECTION