

SECTION 03600

GROUT

PART 1 – GENERAL

1.01 SECTION INCLUDES

- A. Non-Shrink, Non-Metallic Grout.

1.02 RELATED SECTIONS

- A. Cast-In-Place Concrete: Section 03300.
- B. Individual grouting requirements as specified in various other Sections of these Specifications.

1.03 QUALITY ASSURANCE

- A. Manufacturer's Qualifications:
 - 1. Grout manufacturer shall furnish the Owner's Representative with current independent laboratory test results indicating the grout as non-shrink from time of placement; indicating no expansion after final set, ASTM C827; indicating 4,000 psi strength developed with a trowelable mix within 24 hours, ASTM C109; and indicating placement time based on initial set of not less than 60 minutes, ASTM C191.
 - 2. Test results, as supplied by the grout manufacturer, shall indicate that in projects of similar scope and size, the effective bearing area was between 95 and 100 percent.

1.04 REFERENCES

- A. American Concrete Institute (ACI): ACI 308, Recommended Practice for Curing Concrete.
- B. American Society for Testing and Materials (ASTM):
 - 1. ASTM C191 – Time of Setting of Hydraulic Cement by Vicat Needle, Test Method for.
 - 2. ASTM C596 – Drying Shrinkage of Mortar Containing Portland Cement, Test Method for.
 - 3. ASTM C827 – Early Volume Change of Cementitious Mixtures, Test Method for.

1.05 SUBMITTALS

- A. Product data in accordance with Section 01300.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Prevent moisture damage and contamination of materials.

- B. Store materials in undamaged condition with seals and labels intact as packaged by the manufacturer.

1.07 PROJECT CONDITIONS

- A. Protect against high and low temperatures and bad weather in accordance with American Concrete Institute standards for placement of concrete.

PART 2 – PRODUCTS

2.01 MATERIALS

- A. Water: Potable quality, free from deleterious amounts of acids, alkalis, and organic substances.
- B. Non-Shrink Non-Metallic Grout: Factory premixed material containing no corrosive irons, aluminum, chemicals or gypsums.
 - 1. Grouts containing water reducers, accelerators, or fluidifiers shall have no drying shrinkage greater than the equivalent sand cement and water mix as tested per ASTM C596.
 - 2. Grout shall be non-shrink before initial set and show no expansion after set as tested per ASTM C827.
 - 3. Initial set of grout not less than 60 minutes per ASTM C191 Test.
 - 4. Use Type I (Normal) cement for grout applications not in contact with sewage.
 - 5. Use Type II (Sulfate Resistant) cement for grout applications in contact with sewage.
 - 6. Acceptable Manufacturers:
 - a. Master Builders; Set Grout.
 - b. W. R. Meadows; Pac-It.
 - c. Or Equal.

2.02 GROUT QUALITY

- A. Non-Shrink Grout: Use ready-mix type requiring only the addition of water. Do not add other materials. Water requirement proportions shall conform to manufacturer's specifications for the desired mix consistency.

PART 3 – EXECUTION

3.01 PREPARATION

- A. Forming:
 - 1. Use forming procedures that allow proper and complete placement of grout.
 - 2. Anchor Support elements so no movement is possible.
 - 3. Remove supports only after grout has hardened.
 - 4. Pre-treat with forming oils wood forms that may absorb moisture.
- B. Preparation of Surface:
 - 1. General: Clean areas to be grouted free of oil, grease, laitance, dirt and other contaminants. Remove loose material. Remove rust, paint, and oil from metal components in contact with grout.

2. Non-Shrink Grout: Perform additional surface preparation in accordance with manufacturer's instructions.

3.02 MIXING

A. Time:

1. Non-Shrink Grout: In accordance with manufacturer's instructions.

3.03 PLACING

- #### A. Non-Shrink Non-Metallic Grout: Perform grout placement in accordance with the recommendations of ACI and the manufacturer's published specifications for mixing and placing. Place non-shrink non-metallic grout only where indicated on the Standard Details, required by Specifications, or directed by Owner's Representative.

END OF SECTION