



PLANIGROUT 740
Non-Shrink, Underwater Tremie Grout

SECTION 03 62 13
NON-SHRINK GROUTING

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Surface preparation and field application for a one-component, non-shrink, nonmetallic, cement-based tremie grout.

1.2 RELATED SECTIONS

- A. Section 03 30 00 - Cast-in-Place Concrete.
- B. Section 03 60 00 - Grouting

1.3 REFERENCES

- A. ASTM International:
 - 1. ASTM C107 – Standard Specification for Packaged Dry, Hydraulic-Cement Grout (Non-shrink)
 - 2. ASTM C1240 - Standard Specification for Silica Fume Used in Cementitious Mixtures.

1.4 SUBMITTALS

- A. Submit under provisions of Section 01 30 00 - Administrative Requirements.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation methods.
- C. Verification Samples: For each finish product specified, two samples, minimum size 6" (150 mm) square representing actual product, color, and patterns.

1.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Minimum 5 years' experience manufacturing similar products.
- B. Installer Qualifications: Minimum 2 years' experience installing similar products.
- C. Source Limitations: For repair products, obtain each color, grade, finish, type, and variety of product from single source and from single manufacturer with resources to provide products of consistent quality in appearance and physical properties.
- D. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
 - 1. Finish areas designated by Architect.
 - 2. Do not proceed with remaining work until workmanship is approved by Architect. Refinish mock-up area as required to produce acceptable work.



1.6 PRE-INSTALLATION MEETINGS

- A. Convene at least two weeks prior to starting work of this section.

1.7 DELIVERY, STORAGE AND HANDLING

- A. Deliver and store products in manufacturer's unopened packaging bearing the brand name and manufacturer's identification until ready for installation.
- B. Handling: Handle materials to avoid damage.

1.8 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.

1.9 SEQUENCING

- A. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Product Performance:

Compressive strength, plastic consistency – ASTM C942

1 day > 3,500 psi (24.1 MPa)

3 days > 5,520 psi (38.1 MPa)

7 days > 7,250 psi (50.0 MPa)

28 days > 9,000 psi (62.1 MPa)

Consistency Pourable and pumpable

Application temperature range 41°F to 95°F (5°C to 35°C)

- B. Acceptable Manufacturer:

MAPEI North America

1144 E. Newport Center Dr.; Deerfield Beach, FL 33442

Toll-Free for CRS Technical Services: Tel. 888-365-0614

Email: CRS@mapei.com

Web: www.mapei.com

- C. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.
- D. Substitutions: Not permitted.



2.2 NON-SHRINK GROUTING PRODUCTS

- A. Cement-Based, High-Performance, Non-Shrink, Underwater Tremie Grout.
 - 1. Product: Subject to compliance with requirements, provide MAPEI Corporation; Planigrout 740.
 - 2. Compressive Strength: Not less than 9,000 psi (62.1 MPa) in a pourable and pumpable consistency within 28 days when tested according to ASTM C 942.

2.3 MISCELLANEOUS MATERIALS

- A. Portland cement: ASTM C150/C150M, Type I, II or III unless otherwise indicated.
- B. Water: Potable.

2.4 MIXES

- A. General: Mix products in clean containers according to manufacturer's written instructions.
 - 1. Do not add water, thinners or additives unless recommended by manufacturer.
 - 2. When practical, use manufacturer's premeasured packages to ensure that materials are mixed in proper proportions. When premeasured packages are not used, measure ingredients using graduated measuring containers; do not estimate quantities or use shovels or trowels as units of measure.
 - 3. Do not mix more materials than can be used within time limits recommended by manufacturer. Discard materials that have begun to set.
- B. Mortar Scrub Coat: Mix dry ingredients with enough water to provide consistency of thick cream.
- C. Dry-Pack Mortar: Mix required type(s) of patching-mortar dry ingredients with just enough liquid to form damp cohesive mixture that can be squeezed by hand into a ball but is not plastic.
- D. Concrete: Comply with Section 03 30 00 - Cast-in-Place Concrete.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Properly prepared concrete at least 28 days old, stable, sound and dry.
- B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

Refer to ACI 351.1R or ACI 351.2R for surface preparation and grouting procedures.

- A. All substrates must be structurally sound, stable and solid, with all loose materials and unsound concrete removed.
- B. Thoroughly clean surfaces of substances that could affect the bond strength of Planigrout 740,



including dirt, paint, tar, asphalt, wax, oil, grease, latex compounds, form-release agents, laitance, loose toppings, barnacles, marine life, foreign substances and any other residues.

- C. Mechanically profile and prepare concrete surfaces by engineer-approved methods to obtain a 1/4" (6 mm) profile amplitude. Reference International Concrete Repair Institute (ICRI) concrete surface profile (CSP) Standards 7 to 9 for acceptable profile height.
- D. Ensure that the concrete substrate and ambient room temperature are between 41°F and 95°F (5°C and 35°C) before application. Maintain temperatures within this range for at least 72 hours after the installation of Planigrout 740.

3.3 MIXING

Before product use, take appropriate safety precautions. Refer to the Safety Data Sheet for details.

- A. Into a clean mixing pail, pour 3/4 of the required amount of cool, potable water.
- B. Slowly add Planigrout 740 to water while mixing. Slowly add as much of the remaining 1/4 of water as needed until the desired consistency is achieved.
- C. Mix for up to 4 minutes, scraping down any unmixed powder after 1 to 2 minutes, and remix to a smooth, homogenous consistency.
- D. Place immediately after mixing.

3.4 INSTALLATION

Read all installation instructions thoroughly before installation.

- A. For anchor bolt/dowel grouting, hole diameter should be 1" (2.5 cm) greater than bar diameter. When anchoring, degrease any anchor bolts.
- B. To facilitate the filling of hard-to-reach areas, use a wood strip, steel rod or chain.
- C. In underwater applications, seal all gaps in formwork with suitable underwater setting materials or use Planigrout 740 mixed to a stiff consistency. Pump Planigrout 740 through port in bottom of formwork, pushing water out the top side until reaching the desired fill. A professional diver should be utilized to inspect formwork from leakage and repair for proper placement.

3.5 CURING

- A. Curing is not required underwater.

END OF SECTION