

State of Louisiana
Department of Transportation and Development (DOTD)
Materials and Testing Section Approved Materials Procedure
for

GROUT (NON-SHRINK & POST-TENSION)

MATERIAL SPECIFICATION REFERENCE:

DOTD Standard Specifications, Subsection 1018.04, ASTM C1107, PTI M55.1, Supplemental Specifications, Special Provisions.

APPROVED MATERIAL EVALUATION SUBMITTAL:

The manufacturer shall submit a completed Approved Materials Evaluation Submittal to the DOTD Materials and Testing Section Coordinator listed below.

PRELIMINARY REQUIREMENTS:

The complete submittal must include:

- Complete Approved Materials Evaluation Form
- Letter requesting evaluation of the material
- Product Data Sheets
- Safety Data Sheet (SDS)
- Manufacturer's specifications
- Sample
- Independent Laboratory Test Results

NOTE: Evaluation will not begin until the Materials Laboratory receives all required items listed above

Certifications and/or Test Reports

For Non-Shrink Grout, the manufacturer shall provide a Certificate of Analysis (CA) by an independent laboratory showing that the physical and chemical properties meet the requirements of ASTM C1107 in accordance with DOTD's Standard Specifications.

For Post-Tension Grout, the manufacturer shall provide a Certificate of Analysis (CA) by an independent laboratory showing that the physical and chemical properties meet the requirements of PTI M55.1 in accordance with this procedure and DOTD's Standard Specifications.

Product Data Sheets shall provide all pertinent information relative to the material, including but not limited to:

- Manufacturer's specifications
- Mixing instructions
- Intended use of the material
- Typical analysis

PRELIMINARY REQUIREMENTS CONTINUED:

Sample (to be furnished at no cost to the Department)

Submit two (2) dry sacks/bags or a sufficient quantity of grout to yield two (2) cubic feet of mixed grout.

TEST REQUIREMENTS:

Laboratory Testing

For Non-Shrink Grout, the sample will be tested and evaluated in accordance with ASTM C1107.

For Post-Tensioned Grout, the sample will be tested and evaluated in accordance with PTI M55.1 and the requirements in Table 1. Testing of prepackaged grouts shall be performed at the minimum and maximum water/bagged material ratios.

Table 1

| Test Description | Test Method | Value |
|---------------------------------|---|---|
| Chloride Content | AASHTO T 260 or ASTM C1152 | 0.08% Max. |
| Percent Passing No. 50 Sieve | ASTM C136 or TR 113 | 100% |
| Pumpability and Fluidity (Flow) | ASTM C939 (Modified as per PTI M.55.1) | 30 Seconds Max. Immediately After Mixing |
| | | +/- 10 Seconds From Initial Flow (Remixed for 30 Seconds After 30 Minutes) |
| Wick Induced Bleed Test | ASTM C940 | 0.0% After 3 Hours At 68°F |
| Schupack Pressure Bleed Test | ASTM C1741 | 0% at 100 psi |
| Set Time | ASTM C953 | More Than 3 Hours |
| | | Less Than 12 Hours |
| Compressive Strength | ASTM C942 | Min. 3,000 psi at 7 Days |
| | | Min. 5,000 psi at 28 Days |
| Height Change | ASTM C1090 | 0.0% - 0.1% at 24 Hours |
| | | 0.0% - 0.2% at 28 Days |
| Permeability | ASTM C1202 | Less Than 2,500 Coulombs at 30V for 6 Hours |

Evaluation Time (6 Months)

GENERAL:

Upon completion of the evaluation, the submitter will be notified in writing concerning the results of the evaluation and whether the material will or will not be added to the Approved Materials List (AML). The DOTD Materials and Testing Section Coordinator shall be notified in writing of any change from the original material submittal. The Department reserves the right to re-evaluate any material at any time. A Certificate of Analysis (CA) of the material shall be submitted every two (2) years to the DOTD Materials and Testing Section Coordinator to remain on the AML.

It is also the manufacturer's responsibility to supply the contact information of the representative responsible for the material to the Materials Section Coordinator to remain on the AML. This is done by completing the Approved Materials Evaluation Form every two (2) years or when there is a change in the manufacturing representative responsible for the material.

PROJECT ACCEPTANCE REQUIREMENTS:

The inclusion of any material on the AML is not blanket approval for its use. All materials, regardless of prior approval, shall be sampled in accordance to the Materials Sampling Manual.

DISQUALIFICATION AND REMOVAL:

Any material may be removed from the AML at any time. Causes for removal from the AML may include, but are not limited to the following:

- Non-conformance with specifications
- Performance requirements
- Failure to notify the Department of any change in material formulation
- Failure of the supplier to provide proper certifications as required by this procedure
- Failing test results obtained by the Materials Section of project verification samples
- Failure to supply current contact information for the material representative in accordance with this procedure

REQUALIFICATION:

Any material which has been disqualified and removed from the AML will be considered for re-evaluation only after submission of a formal request along with acceptable evidence that the problems causing the disqualification and removal have been resolved.

DOTD MATERIALS AND TESTING SECTION COORDINATOR:

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