



Bureau of Materials Materials Approval Procedures

MAP Number: **106-15**

Effective Date: April 1, 2015

Approved By: Eileen Sheehy

PROCEDURE FOR APPROVAL OF CHEMICAL ADMIXTURES FOR USE IN CONCRETE

PURPOSE:

To establish a procedure to approve Chemical Admixtures for addition to the NJDOT Bureau of Material's Qualified Products List (QPL).

REFERENCES:

New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction
Section 903.02.01

Materials Procedure MP-40, Infrared (IR) Spectrophotometry Analysis of Concrete and Air Entraining Admixtures
AASHTO M 194(ASTM C 494), R 39(C 192), T 22(C 39), T 97(C 78), T 119(C143), T 121(C 138), T141(C 172),
T 152(C 231), T 160(C 157), T 161(C 666), T 197(C 403), and ASTM C 1064.

PROCEDURE:

A. Manufacturer's Request for Approval.

The Manufacturer shall request in writing for the approval of the product. Include the following information in the request: Include the listed forms

1. The name, address, and contact information for the manufacturer.
2. The Type, name, and designation of product to be evaluated.
3. Two copies of documentation that includes the results of tests showing compliance with the AASHTO M 194(ASTM C 494) standards.
4. Copy of the AASHTO Accreditation Program Certification of Accreditation for the laboratory performing the testing. The laboratory must be an independent, third party and must be AASHTO accredited for the testing of Portland Cement Concrete including the following test methods: AASHTO T 22(ASTM C 39), R 39(C 192), T 97(C 78), T 119(C143), T 121(C 138), T 141(C 172), T 152(C 231), T 160(C 157), T 161(C 666), T 197(C 403), and ASTM C 1064. Documentation of AASHTO accreditation must be current and coincide with the dates during which the tests were performed.
5. Materials Safety Data Sheet (MSDS).

With the request the manufacturer shall submit a one quart sample of admixture for ME testing.

Mail the request for approval to the following:

Mailing Address (USPS):

Manager, Bureau of Materials (Thiokol Bldg. 4)
New Jersey Department of Transportation
P.O. Box 600
Trenton, NJ 08625-0600

Street Address (UPS, FedEx, etc.):

Manager, Bureau of Materials (Thiokol Bldg. 4)
New Jersey Department of Transportation
930 Lower Ferry Road
West Trenton, NJ 08628

B. Bureau of Materials Review

Upon receipt of the sample and documentation, the ME will review the test results for conformity with AASHTO M 194(ASTM C 494) specification. If any of the documentation is not acceptable, a letter will be sent to the admixture manufacturer describing the discrepancy and informing the manufacturer what further actions are required.

C. Bureau of Materials Laboratory Testing

If the documentation and test results are acceptable, the ME will perform infrared spectrophotometry, specific gravity, pH, and solids content tests on the admixture in accordance with AASHTO M 194(ASTM C494) and Materials Procedure MP-35. These test results will be kept on file to compare future sample testing compliance with uniformity requirements. A letter will be sent by the ME to the admixture manufacturer stating that the documentation was acceptable and that the test results submitted indicated that the admixture meets the requirements of AASHTO M 194(ASTM C 494).

PROJECT ACCEPTANCE REQUIREMENTS:

Qualification of a product and addition to the QPL does not constitute a blanket approval of the material. The admixture must be verified and approved in a concrete mix design in order to be used. The Contractor for each proposed project must submit the product and source on a Materials Questionnaire as specified in Section 106. The ME will approve the product and source on a project to project basis based on the specifications for the project. The ME will sample, test and accept the material according to the applicable Section of the *NJDOT Standard Specifications for Road and Bridge Construction*. Samples of the approved admixture will be taken periodically to determine compliance with the uniformity requirements of AASHTO M 194.

DISQUALIFICATION:

The ME may remove the product from the QPL for non-conformance with specification requirements or for a documented history of poor field performance. The manufacturer shall notify the ME, in writing, of any change in product formulation. Failure to notify the ME of changes in product formulation will result in disqualification.

REQUALIFICATION:

The ME will reevaluate a product which has been disqualified and removed from the QPL only after submission of a formal request along with acceptable evidence that the problems causing the disqualification have been resolved.

The ME may require the manufacturer to requalify the product for any of the following reasons:

1. To ensure that obsolete products are not kept on the list, the ME may request written confirmation from the manufacturer that the product is still available and has not changed formulation. Failure to respond to the Bureau's written request will result in the product being removed from the list.
2. If the formulation of the product has changed, the ME may require that the new formulation be requalified.
3. If the Department's standard specifications change or if the referenced ASTM or AASTHO standards change, the ME may require requalification to ensure that the product meets the new specification.