

QPL 39 WARM MIX ASPHALT

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PROCEDURES

GENERAL

This evaluation procedure outlines the Department's approval process for warm mix asphalt additives used to reduce mixing and compaction temperatures of bituminous plant mix.

SPECIFICATIONS

407.03

407.11

921.06

ASTM D4867

NTPEP WMA-15

PROCEDURES

The Department shall use the testing results from the National Transportation Product Evaluation Program's (NTPEP) Evaluation of Warm Mix Asphalt Technologies coupled with the Department's internal evaluation program.

Prior to be considered for inclusion on the Department's Qualified Products List a warm mix technology must be certified by NTPEP as having meet all testing requirements for Warm Mix Technologies.

Any change in formulation shall require a resubmittal to NTPEP, products that have not been changed shall resubmit and be tested by NTPEP every 7 years, per NTPEP's Evaluation Program.

Products approved and added to the QPL prior to 2017 shall comply submit their product to NTPEP for evaluation by Dec 31, 2018.

After successful completion of the required NTPEP testing:

1. Submit a completed Product Evaluation Form, MSDS sheets, product data information, and a 1 gallon sample of the product being tested must be submitted to the Division of Materials and Tests.
2. The supplier must be able to show that the technology has been used successfully in the United States on a project receiving an approved level of traffic in excess of one mile in length. The project must have been subjected to traffic loading for greater than one year, and exhibit the following:
 - a) No visible cracking, rutting, or delamination.
 - b) No measurable rutting in excess of 0.25 in (6.35mm).
 - c) Documentation of the additive's successful ability to reduce mixing temperatures without being detrimental to the mixture's ability to achieve roadway density according to Departmental specifications.
3. The warm mix technology must then demonstrate the additive on a TDOT project. The supplier will be responsible for identifying an existing or proposed project for demonstration of the technology, and will be responsible for coordinating the demonstration with the prime contractor. The project must be subjected to traffic loading for greater than one year, and must exhibit the following:
 - a) Details a through c listed above in item 2.
 - b) Documentation of the additive-modified mixture's ability to resist moisture damage by evaluation per TDOT's specification for Tensile Strength Ratio (TSR).
 - i) Test specimens will be prepared from freshly produced warm mix at the plant at temperatures comparable to that in which the mixture is intended to be placed in the field.
 - ii) Prepared specimens shall be tested per TDOT Standard Specification 407.03, by a TDOT certified testing technician.