



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

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**APPROVAL AND TESTING OF AIR ENTRAINING AGENTS AND CHEMICAL
ADMIXTURES FOR CONCRETE**

VERSION: Rev. 0, 20071228

Purpose: This policy describes the approval procedure for air entraining agents, 1024-3 (C), and chemical admixtures, 1024-3 (D).

Submission for Pre-Approval: The manufacturer is required to submit to the Materials and Tests Unit certified reports of tests that show that the admixture meets the applicable specifications. Tests shall be performed in a laboratory certified by the Cement and Concrete Reference Laboratory of the National Bureau of Standards.

The manufacturer shall submit to the Physical Testing Engineer the following for each admixture to be approved:

- A. Completed Admixture Submittal Form.
- B. Current MSDS Sheet
- C. Certificate of Compliance - A notarized certificate containing at a minimum the company name, product name, type of admixture, a statement saying it meets the AASHTO/ASTM standard, will meet the manufacturer's currently published physical properties and performance characteristics, and that the product does not contain any intentionally added chlorides.
- D. Certified test data from an independent laboratory showing the product meets AASHTO M194 Table 1 or AASHTO M154 Table 1.
- E. Current Product Specification Sheet
- F. Technical data sheet stating dosage rates, oz/100 lbs.
- G. Infrared Spectrophotometric Scan of the Sample
- H. Upon request, a sample of the admixture

Chloride Content Limitation: Admixtures that contain chloride are not permitted. The manufacturer is required to state in writing that no chloride was added during the manufacture of the admixture.

Initial Acceptance of the Admixture: The Physical Test Engineer will review the submittal for completeness; review the certified test data and if necessary run a verification test on the sample. If all data is complete and the independent lab data meets the specification the product will be added to the Approved Products List.

Re-Certification: After an admixture is accepted, the manufacturer is required to submit to the Physical Test Engineer on or prior to February 1st of each year a notarized certification that shows that the material is of the same composition as originally accepted and has not been changed or altered. If an admixture is changed or altered, approval of the source in accordance with the above requirements is necessary before using the admixture. If the manufacturer fails to submit the re-certification prior to February 1st, the admixture status will be changed to “pending” and will not be allowed for use on NC Department of Transportation projects.

During this annual re-certification it is a good time for the manufacturer to review the approved products list and check for errors and also inform the Department of any products that have been discontinued.

Random Check Samples and Field Performance: The Department may pull a random check sample from a concrete producer’s dispensing unit and deliver it to the Chemical Laboratory for evaluation. If any discrepancy exist between the original submittal and the check sample, further investigation will be necessary. If a reason for the discrepancy is not found the product may be removed from the approved product list.

Failure of an admixture to perform satisfactorily under job conditions is cause for rejection of the source.