ADMIXTURES FOR CONCRETE CONSTRUCTION - FLORIDA SLAB BEAM SUPERSTRUCTURE SYSTEM.

(REV 2-1-16)

ARTICLE 924-1 is deleted and the following substituted:

924-1 General.

This Section covers materials for use as admixtures for concrete. The use of admixtures is restricted to those admixtures as may be allowed or required elsewhere in the specifications for specific concrete applications. Except for shrinkage reducing admixtures (SRA), admixtures shall comply with applicable AASHTO and ASTM specifications as modified in 924-2.3 through 924-2.7. Admixtures other than SRA that have been previously qualified for Department use are listed on the Department's Approved Product List (APL).

The title of ARTICLE 924-2 is deleted and the following substituted:

924-2 Acceptance of Admixtures other than Shrinkage Reducing.

ARTICLE 924-4 is deleted and the following substituted:

924-4 SRA.

924-4.1 Certification: Manufacturers of SRAs shall submit a certification stating that the SRA meets the requirements of this Section to the Engineer for approval.

924-4.2 Handling: The SRA must not come in contact with any other admixture before or during the batching process prior to mixing, even if diluted in water.

924-4.3 Performance Requirements: Liquid SRAs must reduce drying shrinkage a minimum of 80% during the first 28 days and 50% thereafter. The SRA is to be free of chlorides and must not initiate or contribute to the corrosion of steel reinforcement. The SRA must be compatible with the batch sequencing and other admixtures contained within the mix design.

The proportions of any air-entraining admixtures and water must be adjusted in accordance with the SRA manufacturer's recommendations. Use the dosage rate of SRA recommended by the manufacturer to optimize the effect of the SRA. At seven days, the compressive strength of concrete mixture containing SRA and adjustments to other admixtures and water shall be at least 90% of the seven day strength of the same concrete without the SRA and adjustments to other admixtures and water.

924-4.4 Performance Testing: Test concrete containing SRA in accordance with ASTM C157 before use and as conditions and materials change in order to optimize dosage rates and batch sequence to assure concrete performance. The Engineer may call for a performance test (either prior to or at any time during construction) for determining the effect of the SRA on the performance of the concrete. In general, this check-test will be required only when there is indication that such admixture is giving erratic results or is unduly reducing the strength of the concrete. Testing shall be in accordance in accordance with Section 346.

The following new ARTICLE is added after Article 924-4:

924-5 Retesting.

924-5.1 General: The approved admixtures are required to be tested for their uniformity and equivalence whenever there is an indication of erratic results. The tests shall be performed in accordance with the following procedure. The admixture shall be checked for comparison between infrared spectrophotometry, pH value, specific gravity, and solids content.

924-5.2 Admixtures other than Shrinkage Reducing: Any marked variation from the original curve, pH value, specific gravity, or solids content will be considered sufficient evidence that the chemistry of the original material has been changed and, therefore, the use of this material will be rejected and the material will be removed from the APL.

924-5.3 SRA: Any marked variation from the original curve, pH value, specific gravity, or solids content will be considered sufficient evidence that the chemistry of the original material has been changed and, therefore, the use of this material will be rejected.