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GEORGIA DEPARTMENT OF TRANSPORTATION

STATE OF GEORGIA

SUPPLEMENTAL SPECIFICATION

Section 819—Fiber Stabilizing Additives

Delete Section 819 and substitute the following:

819.1 General Description

This Section covers the general requirements for fiber stabilizing additives incorporated into asphaltic concrete mixtures. These fibers are used to stabilize the asphalt film surrounding aggregate particles to reduce drain-down of the asphalt cement., use cellulose or mineral fiber stabilizer listed on QPL 77, Fiber Stabilizing Additives.

819.1.01 Related References

A. Standard Specifications

General Provisions 101 through 150.

B. Referenced Documents

AASHTO T 245

AASHTO T 305

ASTM D 128

GDT 130

QPL 77

819.2 Materials

Use an approved mineral or cellulose fiber stabilizing additive currently listed in QPL 77. Approved additives shall meet the requirements below. Dosage rates below are typical ranges. Use the dosage rate prescribed in the Job Mix Formula, as approved by the Office of Materials and Research.

A. Requirements for all fiber types

1. Use a fiber stabilizer of the type and properties appropriate to the plant's metering and delivery system.

When tested in a standard mixture according to AASHTO T 305, the fiber stabilizing additive shall limit drain-down to not more the 0.2% of the weight of the mixture. For the purpose of evaluating these additives, the following test conditions apply.

- The mixture tested shall consist of a standard No. 7 stone and 6.4% asphalt cement.

- Mixing and compaction temperatures for the test shall be as prescribed in AASHTO T 245, Section 3.3.1.
- Wet mixing time shall be 60 ± 2 seconds.
- Unseparated fibers, determined by visual inspection of the mixture after the drain-down test, shall not exceed 5% of total fiber content.

B. Cellulose Fibers

Add cellulose fibers at a dosage rate between 0.2% and 0.4% by weight of the total mix, according to the approved Job Mix Formula. Fiber properties shall be as follows:

- Ash Content by ASTM D 128: 23% maximum non-volatile content
- pH: 7.0 to 12.0
- Moisture Content: 5.0% maximum

C. Cellulose Pellets

Use cellulose fiber stabilizing additive in pellet form that meets the requirements of Subsection 819.2.A and Subsection 819.2.B. Use pellets that disperse sufficiently at mixing temperature to blend uniformly into the asphalt mixture. Use pellets that do not exceed 0.24 in (6.0 mm) average pellet diameter. Pellets may contain binder ingredients such as asphalt cement, wax, or polymer. Do not use pellets if the binder ingredient exceeds 20.0% of the total weight of the pellets. Use binder that produces no measurable effect on the properties of the asphalt cement. Do not use fiber pellets which soften or clump together when stored at temperatures up to 122 ^{0}F (50 ^{0}C).

Add approved palletized fiber stabilizing additive at a dosage rate between 0.2% and 0.4% by weight of the total mix, according to the approved Job Mix Formula established by the Office of Materials and Research.

NOTE: If the binder material constitutes more than 3% of the pellet weight, the dosage rate shall be based upon the net fiber content.

D. Mineral Fibers

Use mineral fibers made from virgin basalt, diabase, slag or other silicate rock. Add the fiber at a dosage rate prescribed in the approved Job Mix Formula, between 0.3% and 0.6% by weight of the total mix. Use approved mineral fiber from QPL 77, meeting the following requirements for Shot content, as tested according to GDT 130:

Sieve	Minimum Percent Passing
No 60	90
No. 230	60

E. Materials Warranty

General Provisions 101 through 150.