



## *Florida Department of Transportation*

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### **MEMORANDUM**

**DATE:** November 23, 2015

**TO:** Specification Review Distribution List

**FROM:** Daniel Scheer, P.E., State Specifications Engineer

**SUBJECT:** Proposed Specification: **9190000 Ground Tire Rubber for Use in Asphalt Rubber Binder.**

In accordance with Specification Development Procedures, we are sending you a copy of a proposed specification change.

This change was proposed by Donnie Bagwell of the State Materials Office (SMO) to modify the language to allow the use of ground tire rubber in flowable fill as part of the Department's effort to utilize recyclable materials.

Please share this proposal with others within your responsibility. Review comments are due within four weeks and should be sent to Mail Station 75 or online at <http://www2.dot.state.fl.us/ProgramManagement/Development/IndustryReview.aspx>. Comments received after **December 21, 2015**, may not be considered. Your input is encouraged.

DS/dt  
Attachment

**GROUND TIRE RUBBER FOR USE IN ASPHALT RUBBER BINDER.**  
**(REV 11-13-15)**

SECTION 919 is deleted and the following substituted:

**SECTION 919**  
**GROUND TIRE RUBBER**  
**~~FOR USE IN ASPHALT RUBBER BINDER~~**

**919-1 Description.**

This Section ~~governs~~ specifies the requirements for ground tire rubber (GTR) for use in asphalt rubber binders for use in a variety of paving applications.

**919-2 General Requirements.**

**919-2.1 General:** ~~The gGround tTire rRubber shall be produced from tires and shall be substantially free from contaminants including fabric, metal, mineral, and other non-rubber substances. Up to 4% (by weight of rubber) of talc or other inert dusting agent, may be added to prevent sticking and caking of the particles.~~ sufficiently dry so as to be free flowing and to prevent foaming when mixed with asphalt cement. The rubber shall be substantially free from contaminants including fabric, metal, mineral, and other non-rubber substances. Up to 4% (by weight of rubber) of talc or other inert dusting agent, may be added to prevent sticking and caking of the particles.

**919-2.2 Ground Tire Rubber (GTR) for Use in Asphalt Rubber Binder:** GTR shall be sufficiently dry so as to be free flowing and to prevent foaming when mixed with asphalt cement.

The use of pelletized asphalt rubber is permitted provided the components of the pelletized rubber particles meet the requirements of this Section. Additionally, the pelletized particles must disassociate once blended with asphalt cement.

~~The ground tire rubber and pelletized rubber used shall be one of the products listed on the Department's Approved Product List (APL). Manufacturers seeking evaluation of their product shall submit an application in accordance with Section 6.~~

**919-2.3 Ground Tire Rubber (GTR) for Use in Flowable Fill:** GTR may replace up to 20% of the fine aggregate.

**919-2.4 Approved Product List (APL):** GTR and pelletized rubber used shall be one of the products listed on the Department's Approved Product List (APL). Manufacturers seeking evaluation of their product shall submit an application in accordance with Section 6.

**919-3 Physical Requirements.**

The physical properties of the ground tire rubber shall be determined in accordance with FM 5-559, and shall meet the following requirements:

Specific Gravity .....	1.02 to 1.20
Moisture Content .....	Maximum 0.75%
Metal Contaminants .....	Maximum 0.01%
Gradation.....	Minimum 98% Passing the No. 30 Sieve

**919-4 Chemical Requirements.**

The chemical composition of the ground tire rubber shall be determined in accordance with ASTM D297-13 and shall meet the following requirements:

Acetone Extract.....	Maximum 25%
Rubber Hydrocarbon Content .....	40 to 60%
Ash Content .....	Maximum 8%
Carbon Black Content.....	20 to 40%
Natural Rubber.....	16 to 45%

**919-5 Packaging and Identification Requirements.**

The ground tire rubber shall be supplied in moisture resistant packaging such as either disposable bags or other appropriate bulk containers. Each container or bag of ground tire rubber shall be labeled with the manufacturer's designation for the rubber and the specific type, maximum nominal size, weight and manufacturer's batch or LOT designation.

**919-6 Certification Requirements.**

The Contractor shall provide the Engineer a certification conforming to the requirements of Section 6 from the manufacturer, confirming that the ground tire rubber meets the requirements of this Section.