

ORIGINATION FORM

THE INFORMATION BELOW IS TO BE PROVIDED BY THE ORIGINATOR

Modify Specification _____919_____.
Section/File number

New Section _____.
Section number

Subject: Ground Tire Rubber for use in Asphalt Rubber Binder - Physical Requirements

Origination date: May 23, 2007

Originator: Tom Malerk
Office/Phone: State Materials Office / 352-955-6620
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Problem statement: The specific gravity of the ground tire rubber (GTR) samples tested in our laboratory as a check on the certified test properties by the manufacturer as part of their QPL submittal have been creeping upward over the last years for all GTR manufacturers and all GTR products to the point that many would no longer meet Specification requirements.

Information source: From discussions with experts in this area including: George Way (retired AZ DOT Materials Engineer), Jim Chehovits (Crafco and the expert on asphalt rubber properties), Doug Carlson (Rubber Pavements Association executive director), Mike Heitzman (IA DOT Materials Engineer previously with FHWA), Dr Barry Takalou (consultant to CA DOT on asphalt rubber), Dr Serji Amirkanian (professor Clemson U with expertise in asphalt rubber), it was found that lower specific gravity GTR indicates higher natural rubber content, less filler materials (not added but component part of tire construction), and better resultant asphalt rubber properties. But the reality of whole tire processing, less available truck tire buffings, and increased amounts of passenger tires will result in the observed increase in specific gravity and not controllable by the tire processor (GTR manufacturer).

Background data: For more information please contact Gale Page at 352-955-2903.

Recommended Usage Note: All projects with asphalt beginning with July 2008 letting

Expected fiscal impact, if implemented: No increase or decrease in cost is expected. This will assure that a continuing supply of GTR is available for Department construction projects.

Implementation of these changes, if and when approved, will begin with the July 2008 letting.



Florida Department of Transportation

CHARLIE CRIST
GOVERNOR

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STEPHANIE KOPELOUSOS
SECRETARY

MEMORANDUM

DATE: June 19, 2007

TO: Specification Review Distribution List

FROM: Duane F. Brautigam, P.E., State Specifications Engineer

SUBJECT: Proposed Specifications Change: 9190300 Ground Tire Rubber for use in Asphalt Binder- Physical Requirements

In accordance with Specification Development Procedures, we are sending you a copy of a proposed new specification change for Ground Tire Rubber for use in Asphalt Binder- Physical Requirements.

This change was proposed by Tom Malerk of the State Materials Office to adjust the gravity values for testing.

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 to my attention via e-mail at SP965DB or duane.brautigam@dot.state.fl.us. Comments received after July 18, 2007 may not be considered. Your input is encouraged.

DFB/dm

Attachment

COMMENTS:

Submitted by:

Phone #:

GROUND TIRE RUBBER FOR USE IN ASPHALT RUBBER BINDER
(REV ~~5-23-07~~ 6/12/07)

Article 919-3 (Page 785) is deleted and the following substituted:

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 1.10 ~~±0.06~~ to 1.20

Moisture ContentMaximum 0.75%

Metal ContaminantsMaximum 0.01%

Gradation - The gradation shall meet the limits shown in Table 919-1 for the type of rubber specified.

Table 919-1 Gradations of Ground Tire Rubber			
Sieve Size % Passing	Type A	Type B	Type C
No. 16	---	---	100
No. 30	---	100	70-100
No. 50	100	40-60	20-40
No. 100	50-80	---	---