

ORIGINATION FORM

THE INFORMATION BELOW IS TO BE PROVIDED BY THE ORIGINATOR (The person who receives or originates the issue and needs to forward the issue for action.)

Specification: 336

Subject: Asphalt Rubber Binder

Origination date: November 13, 2009

Originator: Greg Sholar

Office/Phone: State Materials Office / 352.955.2920

Problem statement: Table 336-1 needs general cleanup. Viscosity ranges, not just minimum values, are needed. AASHTO's method for viscosity of asphalt rubber needs to be added as an approved test procedure.

Proposed solution: Clean up Table 336-1. Add viscosity ranges for asphalt rubber. Add AASHTO test procedure T 316 as an approved procedure for determining the viscosity of asphalt rubber.

Information source: SMO Bituminous staff.

Recommended Usage Note: All asphalt projects.

Estimated fiscal impact, if implemented: None.

Implementation of these changes, if and when approved, will begin with the July 2010 letting.

For State Specifications Office Use Only

Begin date:

File Number:

Scheduled completion date:

Implementation date:

Implementation team member:

Usage Note:

Notes:



Florida Department of Transportation

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STEPHANIE KOPELOUSOS
SECRETARY

MEMORANDUM

DATE: December 9, 2009

TO: Specification Review Distribution List

FROM: Rudy Powell, Jr., P.E., State Specifications Engineer

SUBJECT: Proposed Specification: 3360300 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 Greg Sholar of the State Materials Office to add viscosity ranges for asphalt rubber and AASHTO test procedure T 316 as an approved procedure for determining the viscosity of asphalt rubber.

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 ST986RP or rudy.powell@dot.state.fl.us. Comments received after **January 6, 2010**, may not be considered. Your input is encouraged.

RP/
Attachment

ASPHALT RUBBER BINDER.
(REV 11-13-09)

SUBARTICLE 336-3 (of the Supplemental Specifications) is deleted and the following substituted:

336-3 Asphalt Rubber Binder.

Thoroughly mix and react the asphalt binder and ground tire rubber in accordance with the requirements of Table 336-1. Accomplish blending of the asphalt binder and ground tire rubber at the project site/asphalt plant or at the supplier's terminal.

Table 336-1			
Asphalt Rubber Binder			
Binder Type	ARB 5	ARB 12	ARB 20
Rubber Type	TYPE A (or B) ^{*(1)}	TYPE B (or A) ^{** (2)}	TYPE C (or B or A) ^{*** (2)}
Minimum Ground Tire Rubber (by weight of asphalt binder)	5%	12%	20%
Binder Grade	PG 67-22	PG 67-22	PG 64-22
Minimum Temperature <i>Range</i>	300 - 335 ^{°F}	300 - 350 ^{°F}	335 - 375 ^{°F}
Maximum Temperature	335 ^{°F}	350 ^{°F}	375 ^{°F}
Minimum Reaction Time	10 minutes	15 minutes (Type B)	30 minutes (Type C)
Unit Weight @ 60°F ^{*** (3)}	8.6 lbs/gal	8.7 lbs/gal	8.8 lbs/gal
Minimum Viscosity <i>Range</i> ^{**** (4)}	4.0 - 6.0 Poises @ 300°F	10.0 - 15.0 Poises @ 300°F	15.0 - 20.0 Poises @ 350°F

^{*(1)} Use of Type B rubber may require an increase in the mix temperature in order to offset higher viscosity values.
^{** (2)} Use of finer rubber could result in the reduction of the minimum reaction time.
^{*** (3)} Conversions to standard 60°F are as specified in 300-9.3.
^{**** (4)} FM 5-548, Viscosity of Asphalt Rubber Binder by use of the Rotational (*Dip-N-Read*) Viscometer; or *AASHTO T 316, Viscosity Determination of Asphalt Binder Using Rotational Viscometer.*

NOTE: The Contractor may adjust the minimum reaction time if approved by the Engineer depending upon the temperature, size of the ground tire rubber and viscosity measurement determined from the asphalt rubber binder material prior to or during production. Apply the asphalt rubber binder for use in membrane interlayers within a period of six hours, unless some form of corrective action such as cooling and reheating is approved by the Engineer.