



# Florida Department of Transportation

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SECRETARY

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MEMORANDUM NO: 18-01

**THIS MEMO IS EXPIRED**

**TO: DISTRICT CONSTRUCTION ENGINEERS**

**FROM:**   
Greg Sanders, State Construction Engineer

**COPIES:** Bob Burleson, Jim Warren, Bill Albaugh, Ananth Prasad

**SUBJECT: SPECIFICATION REQUIREMENTS FOR ASPHALT RUBBER  
BINDER**

Over the last several months, there have been several projects completed where the asphalt rubber binder specifications, specifically Section 336, were not being properly enforced. Consequently, we felt it might be beneficial to provide a brief specification overview of the asphalt rubber process. A summary of some of the basic requirements is as follows:

On-Site Asphalt Rubber Blending:

- Project personnel need to obtain a copy of the certification for both the asphalt cement and GTR (detailed in 916-1 and 919-6, respectively) on every load of material delivered to the blending site. They also need to verify that the GTR is on the Qualified Products List as described in 919-2. The QPL can be found at the following Infonet address:  
  
<http://infonet.dot.state.fl.us/tlspecificationsoffice/qpl/qplzd.htm>
- Project personnel need to make sure that the correct asphalt cement and ground tire rubber (GTR) are being used, as described in Table 336-1.
- Project personnel are also required to ensure that the Contractor (or Blender) is adding the correct amount of GTR to the asphalt cement each day by keeping up with the amount of GTR used and the amount of asphalt rubber produced, or the amount of GTR used and the amount of asphalt cement used (336-5.1). Knowing these two quantities makes it a fairly simple calculation to determine the percentage

- of GTR being used. Project personnel also need to make sure that during the blending operation that the ARB meets the time and temperature requirements of Table 336-1. (Note: The asphalt cement may need to be heated to a higher temperature since the addition of the GTR at ambient temperatures will cause the temperature during blending to drop.)
- The Contractor is required to determine the rotational viscosity (FM 5-548) of the asphalt rubber at a frequency of one per batch (for batch blending) or two per day (continuous blending) for Quality Control purposes, and make certain that it meets the minimum viscosity requirement specified in Table 336-1. The test temperature (Specified in Table 336-1) is such that no reheating of the sample should be necessary. If the material is stored in a storage tank, QC personnel need to measure the viscosity at the beginning of each day (336-5.3.1). If the QC and Acceptance samples are being tested at the same time, the Contractor can use the Acceptance test result for QC purposes.
- Project personnel are also required to determine the rotational viscosity (FM 5-548) of the asphalt rubber at a frequency of one per batch (for batch blending) or two per day (continuous blending) for Acceptance purposes, and make certain that it meets the minimum viscosity requirement specified in Table 336-1. Again, the test temperature (Specified in Table 336-1) is such that no reheating of the sample should be necessary. If the material is stored in a storage tank, Project personnel need to measure the viscosity at the beginning of each day (336-5.3.1).
- District Materials personnel need to obtain a sample of the asphalt rubber binder and submit it to the State Materials Office for testing at a frequency of one sample per 100,000 gallons. Need to include with the sample the corresponding QC or Acceptance test result on the material. District Materials personnel also need to obtain a sample of the GTR along with a copy of the corresponding certification and submit it to the State Materials Office for testing at a frequency of one sample per project.

#### Remote Asphalt Rubber Blending:

- Project personnel need to obtain a copy of the certification for the asphalt rubber (detailed in 336-5.2), asphalt cement, and GTR (detailed in 916-1 and 919-6, respectively) on every load of material delivered to the plant. Project personnel also need to verify that the GTR is on the Qualified Products List as described in 919-2.

- The Contractor is required to determine the rotational viscosity (FM 5-548) of the asphalt rubber at a frequency of one per incoming load for Quality Control purposes, and make certain that it meets the minimum viscosity requirement specified in Table 336-1. If the material is stored in a storage tank, Contractor QC personnel need to measure the viscosity at the beginning of each day (336-5.3.1).
- If the material is stored in a storage tank, Project personnel need to measure the viscosity at the beginning of each day and make sure it meets the minimum viscosity requirement (336-5.3.1).
- District Materials personnel need to obtain a sample of the asphalt rubber binder from the asphalt plant and submit it to the State Materials Office for testing at a frequency of one sample per 45,000 gallons. Need to include with the sample the corresponding QC or Acceptance test result on the material, as well as the certification from the blender.

These are just some reminders/guidelines on some of the basic specification requirements, and do not include all of the requirements, nor does this document in any manner cancel or supercede the specifications for the project. Should you have any questions concerning this matter, please contact either Pat Upshaw or Jim Musselman at the State Materials Office (352 337-3100) or David Wang at the State Construction Office (850 414-4152).

GX/umwc