



Date: March 31, 2005

Subject: Guidance on AASHTO M320 Specification Limit for Rotational Viscosity

In AASHTO M320, *Specification for Performance-Graded Asphalt Binders*, the original asphalt binder is required to have a rotational viscosity of no more than 3 Pa-s (3000 cP) at 135°C when measured in accordance with AASHTO T316, *Viscosity Determination of Asphalt Binder Using Rotational Viscometer*. While this is not a problem for most PG asphalt binders, the limit may be exceeded for some binders. To address instances when this limit is exceeded, Note b in Table 1 of AASHTO M320 states:

“This requirement may be waived at the discretion of the specifying agency if the supplier warrants that the asphalt binder can be adequately pumped and mixed at temperatures that meet all applicable safety standards.”

When determining the required binder grade for a project, it is important that users understand that many highly modified asphalt binders may exceed this specification limit. In general, users requesting an asphalt binder having a temperature spread (high temperature grade to low temperature grade) of greater than 100 degrees should expect the increased likelihood of the supplied asphalt binder exceeding the rotational viscosity limit of 3 Pa-s (3000 cP) at 135°C. It is our opinion that exceeding the limit in these instances should not be considered a material property failure, but simply a result of the high modification level needed to achieve the required temperature spread.

The user agency, HMA contractor, and asphalt binder supplier should work together to ensure that the required grade is appropriate for the project and that the supplied asphalt binder can be properly handled by the HMA contractor to produce a mixture having the desired in-place properties.

Asphalt Institute Technical Advisory Committee