



Date: May 27, 2021
To: Users of AASHTO M320, *Standard Specification for Performance-Graded Asphalt Binder* and AASHTO M332, *Standard Specification for Performance-Graded Asphalt Binder Using Multiple Stress Creep Recovery (MSCR) Test*
From: Asphalt Institute Technical Advisory Committee
Subject: Changes to Criterion for $G^* \sin \delta$ after PAV aging

At the most recent annual meeting of the AASHTO Committee on Materials and Pavements (COMP) in August 2020, members of Technical Subcommittee (TS) 2b voted to advance changes to the criterion for $G^* \sin \delta$ determined on aged residue obtained after conducting the Pressure Aging Vessel (PAV) procedure in AASHTO M320. The ballot item was passed by the COMP members and was confirmed at the mid-year meeting of TS 2b in January 2021. Similar changes to AASHTO M332 also were confirmed. The next step in the process is publication of the revised standards in AASHTO's Standard Specifications for Transportation Materials and Methods of Sampling and Testing with AASHTO Provisional Standards, 41st Edition, in July 2021.

For your reference, the changes in AASHTO M320 can best be described as follows:

- The $G^* \sin \delta$ criterion will remain at a maximum value of 5,000 kPa at the appropriate intermediate test temperature for all asphalt binders.
- However, asphalt binders that have a $G^* \sin \delta$ value from 5,001 to 6,000 kPa will be considered acceptable if they also have a phase angle of 42 degrees or greater.

In AASHTO M332, the changes are the same as in AASHTO M320, but only for **S** grades. The $G^* \sin \delta$ criterion for H, V and E grades in AASHTO M332 is already a maximum value of 6,000 kPa.

ASTM has made corresponding revisions to ASTM D6373 and D8239 to match the AASHTO standards. Those changes should be published at approximately the same time as AASHTO M320 and M332.

The purpose of this letter is to make users aware of the coming revisions to AASHTO M320 and M332 and to share that the Asphalt Institute Technical Advisory Committee (AI TAC) fully supports these revisions to both PG specifications. We believe the revised criterion will: (1) rectify a previous issue where well-performing asphalt binders could be excluded from meeting a specified grade due to a slightly high $G^* \sin \delta$ value; and (2) help minimize the impact of higher variability seen with DSR testing on PAV-aged binder. Consequently, the AI TAC encourages users to adopt the changes as part of their specifications for PG asphalt binders.

Please contact the Asphalt Institute engineering staff if there are any questions.

Asphalt Institute Technical Advisory Committee
Chair, Pavel Kriz