

2026 Polymer-Modified Emulsified Asphalt Proficiency Samples 7 (A) and 8 (B) Sample Instructions

Closing Date: September 17, 2026

General Information:

Treat each sample as you would treat a typical sample brought into the laboratory. Any special handling or preparation instructions are included below. Conduct tests on each of the two samples in accordance with the instructions below. Report the results of a single determination only, not the average of two or more, unless specified in the test method or instructions.

The instructions and data sheet may direct laboratories to report the results to an extra decimal place beyond what is required by a test method. This extra level of precision improves the quality of the statistical analysis by giving us more detailed data for evaluation.

To permit an estimate of single-operator precision, the same operator should conduct an individual test on both samples. It is not necessary that the same person conduct all the tests in the sample round.

Leave the appropriate spaces on the data sheet blank for any tests you choose not to perform.

Requirements for AASHTO Accredited Laboratories:

AASHTO accredited laboratories are required to perform every test included in an AASHTO re:source Proficiency Sample Program sample round that is also listed in each laboratory's AASHTO Accreditation scope.

[AASHTO Accreditation Policy on PSP Participation](#)

The tests that are not listed in the laboratory's accreditation scope may also be performed, but testing is not required, and the AASHTO Accreditation Program (AAP) will not evaluate the ratings.

Sample Information:

The outside of the sample box is labeled 7 (A) and 8 (B). The bottles inside the box are labeled only (A) and (B). The bottles labeled (A) are sample 7. The bottles labeled (B) are sample 8.

Sample Preparation:

To assist in achieving homogeneity before testing, prepare the samples as follows:

1. Gently heat the emulsion in the original container in a water bath to a temperature of $50 \pm 3^{\circ}\text{C}$ ($122 \pm 5^{\circ}\text{F}$). The set point temperature of the water bath should not be greater than $74 \pm 3^{\circ}\text{C}$ ($165 \pm 5^{\circ}\text{F}$).
2. Vent the container to avoid buildup of pressure inside the container during the heating process.
3. After the emulsion reaches a temperature of $50 \pm 3^{\circ}\text{C}$, remove the container from the water bath, stir the emulsion thoroughly, and cool the material before testing.

Test Methods:

Viscosity of Emulsified Asphalt by Saybolt Furol Viscometer, AASHTO T 59-25 or ASTM D7496-18:

Determine the Saybolt Furol viscosity at 50°C (122°F) including the application of the calibration factor of the viscosity tube. Report the viscosity to the nearest 0.1 s.

Viscosity of Emulsified Asphalts Using a Rotational Paddle Viscometer, AASHTO T 382-22 or

ASTM D7226-24: Determine the apparent viscosity at 50°C (122°F) applying the appropriate correction factor if needed. Report the apparent viscosity to the nearest 0.1 mPa-s. Report the type of device used (TE-DPV – with chiller, or standard DPV without chiller).

Test Methods on the Residue by Distillation, Evaporation, and/or Low-Temperature Evaporation:

Testing Emulsified Asphalts - Residue by Distillation, AASHTO T 59-25 or ASTM D6997-24:

Perform the distillation using the alternative distillation temperature of 175°C (350°F). Report the percent residue by distillation to the nearest 0.1 %. Report the oil distillate as a volume percentage of the total emulsion to the nearest 0.1 %.

Testing Emulsified Asphalts- Residue by Vacuum Distillation, ASTM D7403-19: Determine the percentage of residue by vacuum distillation to the nearest 0.1 %.

Testing Emulsified Asphalts - Residue by Evaporation, AASHTO T 59-25 or ASTM D6934-22:

Determine the percentage of residue by evaporation for each beaker. Report the average of the results to the nearest 0.1 %.

Penetration of Bituminous Materials at 25°C, AASHTO T 49-22 or ASTM D5/D5M-20: Report, to the nearest whole unit, the average of three penetrations (at 25°C, 100 g, 5 sec.) whose values do not differ more than the amount given in T 49 or D5.

Elastic Recovery of Asphalt Materials by Means of a Ductilometer, AASHTO T 301-22 or ASTM

D6084/D6084M-21 (Procedure B): Test three specimens (briquettes). Use a test/bath temperature of 25°C. Pull the specimen clips at a speed of 5 cm/min (2 in./min) to an elongation of 20 cm. Report the average percent elongation recovery (percent elastic recovery) of the three specimens to the nearest 0.1 %.

Ash Content of Asphalt and Emulsified Asphalt Residues, AASHTO T 111-22 or ASTM D8078-24:

Report the ash content of the unconditioned asphalt binder to the nearest 0.01%.

Optional: Determination of Emulsified Asphalt Residue by Quick Boil, ASTM D8467-22: Report the percent residue to the nearest 0.1%.

Multiple Stress Creep Recovery (MSCR) Test of Asphalt Binder Using a Dynamic Shear Rheometer

(DSR), AASHTO T 350-25 or ASTM D7405-24: Perform testing using a 25-mm plate and a 1-mm gap at a temperature of 52°C. Report the average percent recovery at 0.1 kPa ($R_{0.1}$) and 3.2 kPa ($R_{3.2}$), and the percentage difference between average percent recovery at 0.1 kPa and 3.2 kPa (R_{diff}), to the nearest 0.01 %. Report the non-recoverable creep compliance at 0.1 kPa ($J_{nr0.1}$) and 3.2 kPa ($J_{nr3.2}$) to three significant figures (kPa^{-1}) and percent difference between non-recoverable creep compliance at 0.1 kPa and 3.2 kPa ($J_{nr-diff}$) to the nearest 0.01 %.

Contact AASHTO re:source at psp@ashtoresource.org or call 240-436-4900 if there are questions.