

2026 Asphalt Mixture Hamburg Wheel-Track Samples 5 (A) and 6 (B) Sample Instructions

Closing Date: November 5, 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:

You should have received one box of materials. The outside of the shipping box is labeled 5 (A) and 6 (B). The box should contain four quick-release boxes with material weighed to the approximate sample mass. Each quick-release specimen box is labeled for positioning in the Hamburg wheel track machine.

To view a brief video of what should be in the box, please use the following link:

[HWT 5 \(A\) and 6 \(B\) Unboxing Video](#)

Sample Preparation:

Place the quick-release boxes in an oven set to a temperature of $150 \pm 2.5^{\circ}\text{C}$. Allow the samples to heat for 2 hours $\pm$ 15 minutes. Ensure that the SGC molds and any tools are also heated to the compaction temperature ($150 \pm 2.5^{\circ}\text{C}$). Once heated, adjust the specimens to the mass requirements listed in Table 1. Place the specimens back into the oven for an additional 2 hours $\pm$ 15 minutes, spread at a thickness not more than 25 mm.

Table 1 (Sample Mass Requirements – as loaded in machine)

	Left Wheel Specimen Mass Sample 5 (A)	Right Wheel Specimen Mass Sample 6 (B)
Back	2510 + 5g	2520 + 5g
Front	2510 + 5g	2520 + 5g

Compaction:

Determine the Relative Density of Hot Mix Asphalt Specimens by Means of the Superpave Gyratory Compactor AASHTO T312-22: Prior to compaction, determine and record the average temperature of the asphalt mixture. Compact each specimen in accordance with AASHTO T312-22. Set the gyratory compactor to use 600 ± 18 kPa of pressure (standard T 312 pressure) and to stop compaction when the height of the specimen reaches **62 mm**. Record the average time elapsed from when the asphalt mixture was placed in the mold until the time the compactor applies the load to the material.

Test Methods:

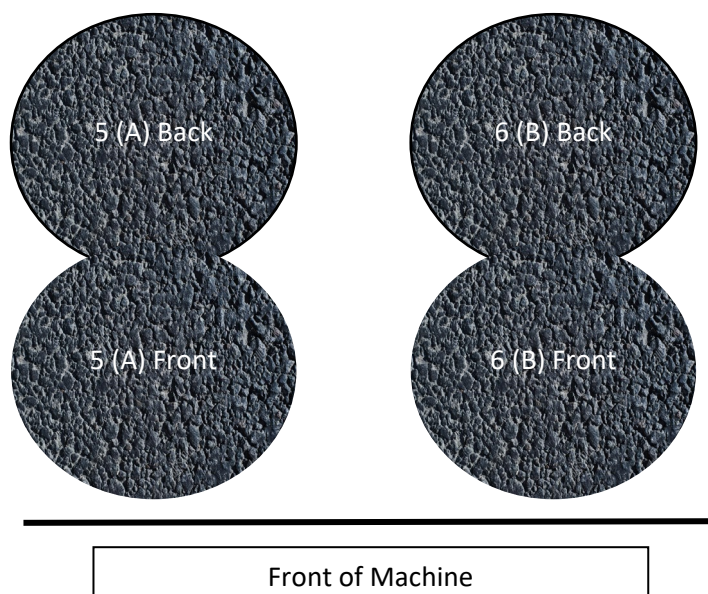
Bulk Specific Gravity of Compacted Asphalt Mixtures Using Saturated Surface-Dry Specimens AASHTO T166-25: Report the average bulk specific gravity (not density) of each extruded specimen to the nearest 0.001 [report the average for Sample 5 (A) and the average for Sample 6 (B)].

Percent Air Voids in Compacted Dense and Open Asphalt Mixtures AASHTO T269-24: Calculate the percent air voids using a **maximum specific gravity value of 2.569** and the average bulk specific gravity for each compacted specimen. Report the average percent air voids to the nearest 0.01 percent [report the average for Sample 5 (A) and the average for Sample 6 (B)].

Moisture Susceptibility Testing:

Place the compacted specimens into the wheel track machine as shown in Diagram 1. Use a temperature of $56 \pm 1.0^\circ\text{C}$ for the dwell and test temperatures, with a maximum number of passes of 20,000. Determine the values of the left [Sample 5 (A)] and right [Sample 6 (B)] wheels for each test property as described on the proficiency sample data sheet. If the Hamburg wheel track machine only has one wheel, first test Sample 5 (A) under the singular wheel, followed by Sample 6 (B) during the second run under the singular wheel.

Diagram 1 (Placement of Compacted Specimens)



Hamburg Wheel-Track Testing of Compacted Asphalt Mixtures AASHTO T324-23: Report the rut depth at 5000, 10000, 15000 and 20000 passes as applicable. Report the Stripping Inflection Point (SIP – nearest pass), rut depth at SIP, and the number of passes to a maximum rut depth of 20 mm. *If there is no SIP, leave line items 9 through 11 blank on the data sheet. If the samples fail before a specified number of passes reported on the data sheet, leave the entry blank for all subsequent “Rut Depth at xx,xxx passes” values.*

Please contact AASHTO re:source at psp@ashtoresource.org or 240-436-4900 if you have any questions.