

## Aggregate Degradation Proficiency Samples 9(A) and 10(B) Instructions for Testing and Reporting

**Closing Date: March 19, 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.

Reporting the results to an extra decimal place beyond what is required by the test method is requested for statistical reasons and equates to more precise data that is available to analyze.

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 receive two boxes of materials for Aggregate Degradation samples 9(A) and 10(B). Each box should contain two bags of material:

**Bag 1:** One 12-kg (26.5-lb) bag of coarse aggregates that is 100% passing the 19.0-mm (3/4-in) sieve but retained on the 2.36-mm (No. 8) sieve

**Bag 2:** One 2.5-kg (5.5-lb) bag of fine aggregate (in moist condition) that is 100% passing the 2.36-mm (No. 8) sieve

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

[AGD 9/10 Unboxing Video](#)

### Sample Preparation:

The following steps should be taken in handling and preparing the samples.

1. Oven-dry the material at  $110 \pm 5^\circ\text{C}$  ( $230 \pm 9^\circ\text{F}$ ) prior to testing.
2. Wash and dry the material in accordance with AASHTO T11/ASTM C117.
3. Separate the material into size fractions by sieving in accordance with AASHTO T27/ASTM C136 to obtain the sample masses specified in the applicable test methods or as described in these instructions. **If conducting the Coarse Aggregate Micro-Deval test (AASHTO T327/ ASTM D6928), batch this material first, then proceed with acquiring specimens for the other tests.**
4. Use the 2.36-mm (No. 8) material **from the 12-kg (26.5-lb) bag** for the Fine Aggregate Micro-Deval test (D7428).

## Test Methods:

**Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine, AASHTO T96-22 or ASTM C131-20:** Perform the ***B Grading*** using 11 steel spheres. Determine the loss in accordance with the procedure. Report the percentage of loss by abrasion and impact to the nearest 0.01 percent.

**Coarse Aggregate Soundness by Use of Sodium Sulfate or Magnesium Sulfate, AASHTO T104-22 or ASTM C88-24:** Perform the test using sodium or magnesium sulfate. Conduct five cycles on the following size fractions: (1) passing the 19.0-mm (3/4-in.) and retained on the 9.5-mm (3/8-in.) sieve, and (2) passing the 9.5-mm (3/8-in.) and retained on the 4.75-mm (No. 4) sieve. For each size fraction, report the material finer than the designated sieve as a percentage of the original mass of the fraction to the nearest 0.01 percent. ***Do NOT determine the weighted average or weighted percentage loss.***

**Fine Aggregate Soundness by Use of Sodium Sulfate or Magnesium Sulfate, AASHTO T104-22 or ASTM C88-24:** Perform the test using sodium or magnesium sulfate. Conduct five cycles on the following size fractions: (1) passing the 2.36-mm (No. 8) and retained on the 1.18-mm (No. 16) sieve, (2) passing the 1.18-mm (No. 16) and retained on the 600- $\mu$ m (No. 30) sieve, and (3) passing the 600- $\mu$ m (No. 30) and retained on the 300- $\mu$ m (No. 50) sieve. For each size fraction, report the material finer than the designated sieve as a percentage of the original mass of the fraction to the nearest 0.01 percent. ***Do NOT determine the weighted average or weighted percentage loss.***

**Resistance of Coarse Aggregate to Degradation by Abrasion in the Micro-Deval Apparatus, AASHTO T327-22 or ASTM D6928-17:** Perform the test using a  $1500 \pm 5$  g sample where the nominal maximum size of the coarse aggregate gradation is 12.5 mm (1/2 in.) or less. Perform the abrasion procedure in accordance with the interval or rotation as specified for a 12.5-mm (1/2-in.) nominal maximum size aggregate. **If performing the test in accordance with ASTM D6928, remove the steel balls as described in Option 1 of Section 9.5.1.** Report the percentage of loss due to Micro-Deval abrasion to the nearest 0.01 percent.

**Resistance of Fine Aggregate to Degradation by Abrasion in the Micro-Deval Apparatus, ASTM D7428-15 (2023):** Using the material retained from the wash and sieve analysis portion of the sample preparation, prepare  $500 \pm 5$  g of the test sample in accordance with Section 8.2 of D7428. Perform the test as directed in Section 9 of D7428. Determine the percentage loss of the total sample mass and report it to the nearest 0.01 percent.

**Coarse Aggregate Soundness by Freezing and Thawing, AASHTO T103-22:** Perform the tests for coarse aggregates using two gradations. The first sample gradation shall total  $1000 \pm 10$  g of 19.0-mm (3/4-in.) to 9.5-mm (3/8-in.) material. The second sample gradation shall total  $300 \pm 5$  g of 9.5 mm (3/8-in.) to 4.75-mm (No. 4) material. (See Table 3 of T103.) Select Procedure A, B, or C to perform the test and indicate the procedure used on the data sheet. Perform 25 freeze-thaw cycles on both gradations. Sieve the  $1000 \pm 10$  g sample over the 8.0 mm (5/16-in.) sieve and sieve the  $300 \pm 5$  g sample over the 4.0-mm (No. 5) sieve. Report the percentage passing for each sample to the nearest 0.1 percent. ***Do NOT determine the weighted average or weighted percentage loss.***