



AASHTO Accreditation Policy and Guidance on Micro-Deval Reference Aggregate

Policy taken from relevant sections of AASHTO T 327, Standard Method of Test for Resistance of Coarse Aggregate to Degradation by Abrasion in the Micro-Deval Apparatus, ASTM D6928, Standard Test Method for Resistance of Coarse Aggregate to Degradation by Abrasion in the Micro-Deval Apparatus, and ASTM D7428, Standard Test Method for Resistance of Fine Aggregate to Degradation by Abrasion in the Micro-Deval Apparatus

Standard Requirements

AASHTO T 327-22

11.1. Reference Aggregate—The laboratory will establish an adequate supply of material to use for monitoring testing consistency through the establishment of control limits. A suitable material with an average loss of between 15 and 25 percent shall be established. From this material, 10 samples shall be taken randomly and tested. At any time a new supply is required, this procedure shall be conducted on a new supply.

ASTM D6928-17

11.1 Reference Aggregate—The laboratory will establish an adequate supply of material to use for verification of the consistency of the test method. A suitable material with a loss of between 10 and 25 % shall be established. From this material ten samples shall be taken randomly and tested. At any time a new supply of the reference aggregate (7.1) is required, this procedure shall be conducted.

ASTM D7428-15 (2023)

7.1 Laboratory Reference Aggregate—A supply of standard "Standard Sutherland Micro-Deval Fine Aggregate."⁶

11.1 Calibration Aggregate—The Laboratory will establish an adequate supply of material to use for calibration of the test method. A suitable material with a loss of between 10 and 25 % shall be established. From this material 10 samples shall be taken randomly and tested. At the same time 10 samples of "Standard Sutherland Micro-Deval Fine Aggregate" (see 7.1) shall also be tested. Provided the mean loss and variation of the "Standard Sutherland Micro-Deval Fine Aggregate" are within allowed tolerance given below in 11.1.1, the mean value and range obtained with the supply of the in-house calibration aggregate shall be used thereafter. At any time a new supply of the in-house calibration aggregate is required, the calibration procedure shall be conducted.

Footnote (6) Available from the Soils and Aggregates Section, Materials Engineering Materials Office, Ministry of Transportation, 1201 Wilson Avenue, Downsview, Ontario, Canada M3M1J8.

Policy

AASHTO T 327 and ASTM D6928 require laboratories to establish a control source of aggregate. The standards are clear on their use, and no clarification is needed. ASTM D7428 requires a specific aggregate that was being provided by the Ontario Ministry of Transportation (MTO) at the time. In the event that the aggregate source is depleted, the MTO will select an alternate aggregate source. The AASHTO Accreditation Program expects laboratories to use the aggregate source provided by the MTO.

Rationale

Due to the potential for changes of the required aggregate in ASTM D7428, there is a need for users of the standard to maintain accreditation even when the specific source requirement noted in the standard cannot be fulfilled. Allowing the MTO to control the distribution of the reference aggregate grants laboratories the ability to remain in conformance as long as the MTO carries out this activity specified in the standard.

Guidance for AASHTO re:source and CCRL Assessments

Assessors will check for conformance to the requirements of AASHTO T327, ASTM D6928, and D7428 pertaining to the establishment of control charts using reference aggregate. If the laboratory uses an aggregate other than that specified in D7428, the laboratory shall present evidence that the reference aggregate being used was supplied by the Ontario Ministry of Transportation for this purpose.

If the laboratory is out of conformance, a nonconformity will be written on the assessment report.

Guidance for AASHTO Accreditation

If a laboratory's report includes nonconformities related to reference aggregate or aggregate control charts for T327 and D6928, the laboratory must submit evidence of possession of the reference aggregate from a local source and records of the required control charts that shows the aggregate has a percent loss within the range specified in the standard.

If a laboratory's report includes nonconformities related to reference aggregate or control charts for D7428, the laboratory must submit evidence of possession of the qualifying reference aggregate from the MTO and records of the required control charts that shows the reference aggregate was tested as required by the standard.