

Recommend Approval: <u>Sejal Bhatt</u> 9/26/12 Assistant Division Chief Date <u>Sejal Bhatt</u> 09/26/12 Division Chief Date	Maryland Department of Transportation State Highway Administration Office of Materials Technology MARYLAND STANDARD METHOD OF TESTS	
Approved: <u>Tim Smith</u> 10-02-12 Director Date	SOURCE APPROVAL PROCEDURE FOR AGGREGATE USED IN ASPHALT SURFACE COURSES	MSMT 456

SCOPE:

This procedure is used for the qualification and approval of aggregates sources used in Maryland Hot Mixed Asphalt mixes. The qualification tests, and friction values and other requirements are specified below and in Tables 901 C and D.

REFERENCED DOCUMENTS

- D 3319 Accelerated Polishing of Aggregates Using the British Wheel
- D 4791 Test Method for Flat Articles, Elongated Particles, or Flat and Elongated Particles in Coarse Aggregate
- E 303 Measuring Surface Frictional Properties Using the British Pendulum Tester
- T 2 Sampling of Aggregate
- T 11 Materials Finer than 75 mm (No. 200) Sieve in Mineral Aggregates by Washing
- T 19 Bulk Density ("Unit Weight") and Voids in Aggregate
- T 27 Sieve Analysis of Coarse and Fine Aggregate
- T 84 Specific Gravity and Absorption of Fine Aggregate
- T 85 Specific Gravity and Absorption of Coarse Aggregate
- T 96 Resistance to Abrasion of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine
- T 104 Soundness of Aggregate by Use of Sodium Sulfate or Magnesium Sulfate
- MSMT 215 Laboratory Method of Polishing Aggregates Using the Circular Track Polishing Machine
- MSMT 216 Method of Measuring Frictional Properties of Aggregates Using the Dynamic Friction Tester

MATERIALS AND EQUIPMENT:

Refer to above referenced test procedures.

PROCEDURE:

1. Obtain approximately 160 lbs. (4 bags) of aggregate from the producer sampled in accordance with T 2.
2. Prepare approximately 3 kg of the sampled aggregate for shipment to an independent laboratory for petrographic analysis and acid insoluble residue (AIR) testing per D 3042.
3. Perform full Quality testing for HMA aggregate on the sampled material as specified in the Aggregate Bulletin.
4. If the aggregate passes all tests; ship the material prepared in Step 2 and proceed to Step 6.
5. If the aggregate fails any quality test, it is retested and the results averaged. If the aggregate fails again, it is rejected.
6. Determine the Dynamic Friction Value (DFV) as specified in MSMT 215 and 216.
7. Determine the British Pendulum Number (BPN) as specified in D 3319 and E 303.
8. Based on the friction values obtained in Steps 6 and 7 and Tables 901 C and D; determine the acceptable mix or mixes in which the aggregate may be used.

REPORT:

1. Report the DFV to the nearest whole number.
2. Report the BPN to the nearest whole number.