

**OHD L-48
METHOD OF TEST FOR
DETERMINING PERCENT DUST COATING OF COVER AGGREGATES
FOR BITUMINOUS SURFACE TREATMENTS**

1. SCOPE

- 1.1. This test method covers determination of the amount of material finer than a No. 200 (75 µm) sieve adhering to the coarse aggregate retained on the No. 8 (2.36 mm) by washing. Clay particles and other aggregate particles that are dispersed by the wash water, as well as water-soluble materials, will be removed from the aggregate during the test.

2. REFERENCED DOCUMENTS

2.1. *AASHTO Standards:*

- M 92, Wire-Cloth Sieves for Testing Purposes
- M 231, Weighing Devices Used in the Testing of Materials
- R 90, Sampling Aggregate Products
- T 11, Materials Finer Than No. 200 Sieve by Washing
- T 27, Sieve Analysis of Fine and Coarse Aggregates
- R 76, Reducing Samples of Aggregate to Testing Size

3. APPARATUS AND MATERIALS

- 3.1. *Balance* - Conforming to Class G2, M 231.
- 3.2. *Sieves* - A minimum of two sieves, No. 200 and No. 8, conforming to M 92.
- 3.3. *Mechanical Sieve Shaker* - If used, shall create a sieving action such that criterion for adequacy of sieving described in T 27 is met in a reasonable time period.
- 3.3. *Container* - Pan or vessel of a sufficient size to contain the sample covered with water and to permit vigorous agitation without loss of any part of sample or water.
- 3.4. *Oven* - Capable of maintaining a uniform temperature of 230 ± 9°F (110 ± 5°C).

4. SAMPLING

- 4.1. Sample the aggregate in accordance with R 90.
- 4.2. Thoroughly mix the sample and reduce it to an amount suitable for testing using the applicable procedures described in R 76. The sample for test shall be approximately of the mass desired when dry and shall be the end result of the reduction. Reduction to an exact predetermined mass shall not be permitted.
- 4.3. The mass of the test sample shall conform with the following:

Nominal Maximum Size Aggregate, (in)	Min. Mass of Test Sample (g)
3/8	1000
1/2	2000

Note - The nominal maximum size of aggregate as defined in AASHTO R 90

5. PROCEDURE

- 5.1. Dry the sample to a constant mass at a temperature of $230 \pm 9^{\circ}\text{F}$ ($110 \pm 5^{\circ}\text{C}$).
- 5.2. Allow the sample to cool to room temperature.
- 5.3. Shake the sample over a No. 8 (2.36 mm) sieve and discard the fraction passing the No. 8 (2.36 mm) sieve. Agitate the sieve for a sufficient period to separate the plus and minus No. 8 (2.36 mm) size fraction, but not so great as to create additional fines through degradation of the coarse particles.
- 5.4. Prevent an overload of the sieve by one of the methods described in T 27.
- 5.5. Determine the mass of the sample to the nearest 0.1 g
- 5.6. Wash the sample as described in T 11, Procedure A - Washing With Plain Water, making sure to return all material retained on the wash sieves to the sample.
- 5.7. Dry the washed aggregate to a constant mass at a temperature of $230 \pm 9^{\circ}\text{F}$ ($110 \pm 5^{\circ}\text{C}$).
- 5.8. Allow the sample to cool to room temperature.
- 5.9. Determine the mass of the washed sample to the nearest 0.1 g

6. CALCULATION

- 6.1. Calculate the percent dust coating as follows:

$$A = [(B - C) / B] \times 100$$

where:

A = percent dust coating

B = dry mass of sample before washing, g; and

C = dry mass of sample after washing, g.

7. REPORT

- 7.1. Report the percent dust coating to the nearest 0.1 percent.

Revision Date	Revision Description
11/28/2018	Changed all instances of T 2 to R 90 (AASHTO test method was reclassified). Also changed standard name, located in third bullet under AASHTO Standards (section 2.1) from "Sampling of Aggregates" to "Sampling Aggregate Products".
10/13/2016	Changed all instances of T 248 to R 76 (AASHTO test method was reclassified).
02/23/2004	On page 1 of 2, Section 4.1, deleted sentence, "The mass of the field sample shall be a minimum of four times the mass required in Section 4.3."
11/16/2009	On page 1, Section 3.1, Balance - Readable to 0.1 percent of the sample mass, conforming to M-231. Conforming to Class G2, M 231.