

Method of Test for Determining the Drain Down Percent in Uncompacted Bituminous Paving Mixtures

1. Scope:

This test is for determining the amount of drain down in an uncompacted bituminous paving mixture such as Class S or SMA type mixes.

2. Apparatus:

- 2.1 Container with cover suitable for a sample of hot uncompacted hot mix (cement can).
- 2.2 Forced draft convection oven capable of maintaining the temperature at any temperature up to $350^{\circ} \pm 5^{\circ}$ F.
- 2.3 Balance with a capacity of at least 5,000 grams, sensitive and readable to 0.1 gram. Use of a piece of wood or metal on the scale is recommended to protect the scale from the elevated temperatures.
- 2.4 Gloves
- 2.5 Standard basket with a height of $6.5'' \pm 0.7''$ by $4.3'' \pm 0.4''$ with a bottom basket shelf at $1.0'' \pm 0.1''$ measured from the base, made of standard 0.25" sieve cloth.
- 2.6 Plates such as pie tins, tops of cement cans or small metal pans.

3. Procedure:

- 3.1 Sample shall be obtained from a truck at the plant site at the plant production temperature.
- 3.2 Obtain a representative 1,000 to 3,000 gram sample of uncompacted hot mix from a truck box at the plant site.
- 3.3 Place the sample in the container, put on the cover and transport back to the lab.
- 3.4 Transfer 1200 ± 200 grams of hot plant produced mix sample to a tared wire basket. Determine the weight of the sample not including the basket to the nearest 0.1 gram.
- 3.5 Weigh and record the initial weight of the plate to the nearest 0.1 gram. Place the basket with hot mix material on the plate and place in an oven that is at the temperature the hot mix is being discharged from the drum for 60 ± 5 minutes.

3.6 Weigh and record the final weight of the plate with drain down material to the nearest 0.1 gram.

4. Report:

4.1 Calculate the percent of hot mix that drained by subtracting the initial plate weight from the final plate weight and dividing this value by the weight of the sample. Multiply the result by 100 to get the percent and record to the nearest 0.1 percent. Report on form DOT- 91.

$$\% \text{ Drain down} = \frac{A - B}{C} \times 100$$

A = Final plate weight

B = Initial plate weight

C = Weight of the sample

5. References:

AASHTO T 305
DOT-91

Sample ID: 2225690

Asphalt Draindown Worksheet

DOT-91
3-19

PROJECT PH 0088(00)15 COUNTY Aurora, Ziebach PCN B015
Field # 01 Date Sampled 05/02/2019 Date Tested 05/02/2019
Sampled By Tester, One Tested By Tester, One Checked By Tester, Two
Mix Type Class S Asphalt Cement PG 64-34 Cellulose Fibers 0.3

Weight of test sample	<u>1,237.6</u>	grams
Weight of container empty	<u>127.2</u>	grams
Draindown	<u>0.2%</u>	≤ 0.3%
Weight of container after test	<u>130.0</u>	grams
Temperature of test sample	<u>300</u>	*F

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Figure 1