

Method of Test for Determining the Moisture Content in Uncompacted Bituminous Paving Mixtures and Reclaimed Asphalt Pavement (RAP)

1. Scope:

This test is for determining the amount of moisture in an uncompacted bituminous paving mixture or a reclaimed asphalt pavement (RAP) mixture.

2. Apparatus:

- 2.1 Container with cover suitable for a sample of hot uncompacted hot mix or reclaimed asphalt pavement mixture (cement can or suitable container).
- 2.2 Convection oven capable of maintaining the temperature at $270^{\circ} \pm 10^{\circ}\text{F}$.
- 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.

3. Procedure:

- 3.1 Weigh and record the weight of a sample container and cover to the nearest 0.1 gram.
- 3.2 Obtain a representative 1,500 to 3,000 gram sample of uncompacted hot mix from the paver area in accordance with SD 312 or RAP mix from the belt or stockpile.
- 3.3 Place the sample in the container, put on the cover and transport back to the lab.
- 3.4 Weigh and record the weight of the container, cover and uncompacted hot mix or RAP to the nearest 0.1 gram. Subtract the weight obtained in 3.1 above from this weight to determine the original weight of the uncompacted hot mix (Which includes moisture).
- 3.5 Place the container and uncompacted hot mix or RAP without the cover in an oven set at $270^{\circ} \pm 10^{\circ}\text{F}$ for 2 hours.
- 3.6 Weigh and record the weight of the container and uncompacted hot mix or RAP to the nearest 0.1 gram.
- 3.7 Place the container and hot mix or RAP back in the oven and weigh at 1 hour intervals until constant weight is obtained. Constant weight for this test procedure is defined as when the material does not lose more than 0.05% of

the original weight of the hot mix or RAP sample (Obtained in 3.4 above) in a one hour period.

- 3.8 Once constant weight has been obtained, record the weight of the container, cover, and hot mix or RAP to the nearest 0.1 gram.
- 3.9 Subtract the final weight of the uncompact hot mix or RAP, container, and cover from the original weight of the uncompact hot mix or RAP, container and cover determined in 3.4 to determine the amount of moisture in the mix.

4. Report:

- 4.1 Calculate the moisture content in the mix to the nearest 0.1 percent. Report on form DOT-35.

$$\frac{A - B}{B} \times 100$$

A = Initial weight of uncompact hot mix or RAP

B = Final dry weight of uncompact hot mix or RAP

5. References:

SD 312
DOT-35