

DETERMINATION OF DRAIN DOWN CHARACTERISTICS IN UNCOMPACTED ASPHALT MIXTURES

AASHTO T 305\_\_\_\_\_

SIGNIFICANCE OF USE

Draindown is considered to be the portion of material that separates itself from the sample as a whole and is deposited outside the wire basket during the test. The material that drainsdown may be composed of either asphalt binder or a combination of asphalt binder and fine aggregate.

The purpose of the test is to ensure that the draindown is within acceptable levels, encountered during production, storage, transport and placement of mixture. Primarily used for mixtures with high coarse aggregate content such as porous asphalt (open-graded friction course) and SMA (Stone Mastic Asphalt).

APPARATUS

1. Standard Basket
  - a. Wire basket of 6.3 mm ± 0.25 mesh ..... \_\_\_\_\_.
  - b. Diameter 108mm ± 10.8mm ..... \_\_\_\_\_.
  - c. Height 165mm ± 16.5mm..... \_\_\_\_\_.
  - d. Raised Base 25mm ± 2.5mm..... \_\_\_\_\_.
2. Plates  
Suitable containers of appropriate size
3. Balance, sensitive, readable, and accurate to 0.01% of sample weight or 0.1 g (greater)? \_\_\_\_\_.
4. Oven, maintains required temperature ± 3°C? ..... \_\_\_\_\_.

PROCEDURE

1. Samples  
For each mix the sample should be determined at 2 different temperatures  
 1 the anticipated plant production temperature  
 2 15C above that temperature  
 For each temperature duplicates should be run  
 Total number of samples is 4 ..... \_\_\_\_\_.
2. Mass of Sample 1200g ± 200g..... \_\_\_\_\_.
3. Place sample into tared wire basket (do not consolidate sample)..... \_\_\_\_\_.
4. Place basket into the oven for 60 ± 5 minutes. .... \_\_\_\_\_.
5. Remove basket and determine the mass of drain down material ..... \_\_\_\_\_.

CALCULATION

$$\frac{M_f - M_i}{M_t} * 100\%$$

Where:

Mf = Final mass of container

Mi = initial mass of container

Mt = total initial sample mass