DRYING
HOT MIX ASPHALT
ITM 572

APPARATUS

[ ] Balance, sufficient capacity for sample, readable to 0.1 g or better, in accordance with AASHTO M 231
[ ] Oven, maintained at 221 ± 9°F
[ ] Electric skillet, with thermostatic heat control capable of heating to 221°F
[ ] Round, bowl type, metal pan
[ ] Sample container
[ ] Spatula
[ ] Vacuum chamber
[ ] Infrared thermometer
[ ] Paper towels or absorptive cloth

PROCEDURE

[ ] Weight of un-compacted sample as follows

Mixture Designation	Minimum Weight of Sample (g)
4.75 mm	1000
9.5 mm	1500
12.5 mm	2000
19.0 mm, OG 19.0 mm	3000
25.0 mm, OG 25.0 mm	4000

Plate Sample

[ ] Weight of pan and spatula determined at approximately 221 ± 9°F
[ ] Sample contained in sealed oven bag immediately placed in the pan with a spatula, and placed in oven at 221 ± 9°F
[ ] Weight of sample, pan, and spatula determined after 1 hour
[ ] Bag opened and sample, pan, and spatula placed in oven at approximately 221 ± 9°F
[ ] Sample, pan, and spatula weighed at 15 minute intervals until constant weight (Note 1) is obtained
[ ] Sample stirred after each weighing if sample has not reached constant weight

Note 1 -- Constant weight is defined as the weight at which further drying at the required temperature does not alter the weight by more than 0.05 percent.

Truck Sample

[ ] Weight of pan and spatula determined at approximately 221 ± 9°F
[ ] Sample contained in sealed oven bag immediately placed in pan with spatula and weighed
[ ] Bag opened and pan, spatula, and sample with bag placed in oven at 221 ± 9°F
[ ] Sample, pan, and spatula weighed at 15 minute intervals until constant weight (Note 1) is obtained
[ ] Sample stirred after each weighing if sample has not reached constant weight

Vacuum Drying Cores

[ ] Manufacturers recommendations for warm up and self test procedures followed
[ ] Cold trap and specimen chamber dried
[ ] Apparatus run without sample to verify pressure reading on display is 6 mm Hg or less
[ ] Infrared thermometer used to verify that surface temperature of core is 60 - 90°F
[ ] Any standing water on the surface of the core is removed with a paper towel or absorptive cloth
[ ] Core placed on top of sample support plate inside vacuum chamber
[ ] Lid on vacuum chamber pressed down to secure contact between lid and vacuum chamber
[ ] Drying process started
[ ] Drying continued until constant weight is achieved (Note 2)

Note 2 -- Constant weight is defined as the weight at which further drying does not alter the weight by more than 0.05 percent when weighed after at least 2 drying cycles of the vacuum-drying apparatus required in ASTM D 7227.

Oven Drying Cores

[ ] Core dried overnight at 125 ± 5°F
[ ] Core weighed and weight recorded
[ ] Core dried at 125 ± 5°F for 2 hours
[ ] Core weighed and weight recorded. If core has not reached constant weight (Note 1), core is dried and weighed at 2 hour intervals until constant weight is obtained

Plate or Truck Sample - No Moisture Determination

[ ] Sample, sample container, and spatula placed in oven at 221 ± 9°F
[ ] If skillet is used, sample and spatula placed in skillet at approximately 221°F
[ ] Sample, sample container or skillet, and spatula weighed at 15 minute intervals until constant weight (Note 1) is obtained
[ ] Sample stirred after each weighing if sample has not achieved constant weight

CALCULATIONS

[ ] Moisture content calculated correctly to 0.01% as follows:

$$\text{Moisture Content, \%} = \frac{W_1 - W_2}{W_2} \times 100$$

where:

W_1 = original weight of sample, g
W_2 = constant weight of sample, g

NA - Not Applicable
X - Requires Corrective Action
√ - Satisfactory

_____
Acceptance Technician

_____ _____
INDOT Date

Comments: _____

_____

_____