

**IA Checklist
 OHD L-26
 METHOD "A"
 ASHALT CONTENT BY IGNITION OVEN**

Procedure	P	F	NA
1			
The bituminous mixture used for preparing the test sample will be obtained in accordance with OHD L-65. The test sample will be prepared by splitting or quartering this material, in accordance with AASHTO R 47, to the appropriate size as shown in Table 1 below.			
2			
If the mixture is not sufficiently soft to separate with a spatula or trowel, place it in a large flat pan and warm to 257 ± 9°F [125 ± 5°C] for 25 minutes. The sample will not be heated for more than 1 hour.			
3			
The minimum mass of the test sample is governed by the maximum aggregate size in the mixture. The maximum aggregate size for the purposes of these test methods is defined as the smallest sieve through which 100 percent of the material is required to pass. The maximum mass of the sample shall not be more than 500 g greater than the minimum mass. No sample shall be less than 1,000 g. (See table 1)			
4			
Split or quarter the remaining mixture to obtain a test sample for moisture and volatile determination. The size of the test sample should be the same as recommended in Table 1 or 1,000 ± 250 g. Place the test sample in a tared pan and determine the mass to the nearest 0.1 g and record as W _{1m} . Dry to a constant mass in an oven at a temperature of 257 ± 9°F [125 ± 5°C]. Determine the mass of the sample to the nearest 0.1 g and record as W _{5m} . The moisture and volatiles weights are used in the determination of bitumen content, as shown in calculations, on page 2. NOTE: The same test specimen may be used for the moisture and volatiles determination and bitumen determination.			
5			
Preheat the ignition furnace to 1,000°F [538°C]. Record the furnace temperature (set point) prior to the initiation of the test. For Troxler oven, record temperature used.			
6			
Enter the correction factor (IOC) for the specific mix to be tested, as shown on the approved mix design, in the ignition furnace.			
7			
Weigh and record the weight of the two sample baskets and catch pan (with guards in place).			
8			
Evenly distribute the mix between each basket, keeping the material approximately 1 in. away from the edges of the basket.			
9			
Weigh and record the sample, baskets, and catch pan. Calculate and record the initial weight of the sample specimen (total weight minus the weight of the sample basket assembly).			
10			
Input the initial weight of the sample specimen in whole gram into the ignition furnace controller. Verify that the correct weight has been entered.			

11	Open the chamber door and place the sample baskets in the furnace. Close the chamber door and verify that the sample weight (including the baskets) displayed on the furnaces scale equals the total weight recorded in step 9 within 5 g. Differences greater than 5 g of failure of the furnace scale to stabilize may indicate that the sample baskets are contacting the furnace wall. Initiate the test by pressing the start/stop button. This will lock the sample chamber and start the combustion blower.			
12	Allow the test to continue until the stable light and audible stable indicator indicate the test is complete. Press the start/stop button. This will unlock the sample chamber and cause the printer to print out the test result.			
13	Open the chamber door, remove the sample baskets and allow to cool to room temperature (approximately 30 minutes). Allow the specimen to cool to room temperature in the sample baskets.			
14	Empty the contents of the baskets into a flat pan. Use a small wire sieve brush to ensure that any residual fines are removed from the baskets.			
15	Perform the gradation analysis according to AASHTO T 30.			
16	Percent bitumen reported to the nearest tenth.			

Table 1

Maximum Aggregate Size (in)	Maximum Aggregate Size (mm)	Minimum Mass of Sample (g)	Mixture Types
1.5	37.5	2500	S2, OGGB
1	25.0	2000	S3
3/4	19.0	1500	S4, SMA, PFC, RBL, UTBWC (Type C)
1/2	12.5	1200	S5, OGFSC, Micro Surfacing (Types II and III), UTBWC (Type B)
3/8	9.5	1000	S6, Micro Surfacing (Type I), UTBWC (Type A)

Calculations

$$\% AC = \frac{(P_{5m} \times W_{1m}) - (W_{1m} - W_{5m})}{W_{5m}} \times 100$$

Where: % AC = Percent asphalt cement (percent bitumen);
P_{5m} = Apparent asphalt content from ignition oven;
W_{1m} = Mass of moisture sample before drying; and
W_{5m} = Mass of moisture sample after drying.

Remarks: