

SAMPLING ASPHALT MIXTURES

1. SCOPE - This method covers the procedures for sampling asphalt mixtures. Conform to the chart in Subsection 5.2.2 of this method listing the required minimum sample sizes.

NOTE 1: SAMPLING IS AS IMPORTANT AS TESTING. TAKE EVERY PRECAUTION TO OBTAIN A REPRESENTATIVE SAMPLE. DO NOT TEST A SAMPLE THAT IS NOT REPRESENTATIVE OF THE BULK MATERIAL.

2. APPARATUS AND MATERIALS – Provide the following:
 - 2.1. A square-ended shovel, at least five inches wide.
 - 2.2. A large scoop.
 - 2.3. A large pan.
 - 2.4. A surface for quartering the sample.
 - 2.5. A spatula or other quartering instrument.
 - 2.6. A marker (for identification).
3. SAMPLING LOCATION - Normally, obtain samples from the truck bed at the plant site. However, the Department does reserve the right, when unusual circumstances are encountered or the results of testing indicate the need for further testing, to sample at any point.
4. SAMPLING PROCEDURE -
 - 4.1. Prior to obtaining the sample from the truck bed or other sampling site, carefully inspect the uniformity of the material. In order to adequately represent the lot of material, obtain sample portions from three or more locations over the truck load or other sampling location. Obtain enough portions to provide a sample of adequate size for all required testing and to accurately represent all observed conditions within the load.
 - 4.2. Obtain each portion by digging approximately 12 inches into the pile of mixture, then inserting the shovel at an angle, and removing the sample. Place each portion into a large pan.
5. OBTAINING THE TEST PORTION -
 - 5.1. Conform to the following means of obtaining, and the size of, the test portion:
 - 5.2. When the mixture is to be tested according to Kentucky Method (KM) 64-405, *Extraction of Binder From Asphalt Paving Mixtures*, obtain the test portion by first mixing the total sample thoroughly, then removing a portion for testing by quartering.

5.2.1. Place the field sample on a hard, clean, smooth, level surface where there will be neither loss of material nor the accidental addition of foreign material. Mix the

material thoroughly by blending the entire sample. Place the entire sample into a conical pile by depositing material on top of itself. Flatten the conical pile to a uniform thickness and diameter by pressing down the apex with a shovel or tool. Divide the flattened mass into four equal quarters with a shovel or tool, and push aside two diagonally-opposite quarters, including the fine material. Successively mix and quarter the remaining material until the sample is reduced to the required test portion. Retain the remaining portions (quarters), and identify the truck number, time and date the sample was taken, and the project number, for further testing if necessary.

5.2.2 Conform to the following minimum sizes for testing according to KM 64-405:

<u>Mixture Types</u>	<u>Minimum Weight (g)</u>
Sand Asphalt	1000
Open-Graded Friction Course, Asphalt Wedge Curbs and Mountable Medians, and 0.38-inch nominal-maximum	1500
Asphalt-Treated Drainage Blanket and 0.5-inch nominal-maximum	2000
Asphalt Mixture for Pavement Wedge and 0.75-inch nominal-maximum	3000*
1.0-inch and 1.5-inch nominal-maximum	5000*

* When the capacity of the extraction apparatus is not sufficient for the quantity indicated, subdivide the test portion. Separately test the two or more resulting portions, and combine the results, as a weighted average, to constitute one test.

These values are minimum sizes only. When obtaining the test portion for an extraction acceptance test, do not manipulate the sample such that it weighs exactly the specified minimum weight. Use the sample weight of the quarter obtained, providing it meets the required minimum.

- 5.3 When the mixture is to be tested according to KM 64-437, *Determination of Asphalt Binder Content of Asphalt Mixtures Using the Nuclear Asphalt Content Gauge*, obtain the field sample according to Subsections 4.1 and 4.2 of this method.

Obtain the test portion as follows. Mix the sample thoroughly by blending the entire field sample. Take extreme care to uniformly blend all of the material. Then, using a scoop, select representative portions of the mixture until the quantity of material described in KM 64-437 is obtained.

- 5.4. When the mixture is to be tested according to KM 64-435, *Method for Acceptance of Asphalt Mixtures by Mixture Property Analysis*, obtain the field sample according to Subsections 4.1 and 4.2 of this method.

Obtain the test portion as described in Subsection 5.3 of this method. Ensure the test portion quantities comply with the amounts required in AASHTO T 312, *Determining the Density of Hot-Mix Asphalt (HMA) Specimens by Means of the Superpave Gyratory Compactor*, for gyratory specimens, and AASHTO T 209, *Theoretical Maximum Specific Gravity and Density of Bituminous Paving Mixtures*, for maximum-specific-gravity (G_{mm}) samples.

- 5.5. When the mixture is to be tested according to KM 64-438, *Asphalt Binder Content Determination of Asphalt Mixtures Based on the Maximum Specific Gravity*, obtain the field sample according to Subsections 4.1 and 4.2 of this method.

Obtain the test portion as described in Subsection 5.3 of this method. Ensure the test portion quantities comply with the amounts required in AASHTO T 209.

APPROVED _____
Director
DIVISION OF MATERIALS

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