

GSP 15

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A. General Description

Use this procedure to sample hot mix asphalt concrete mixtures from full trucks, roadways, or, occasionally, partially loaded trucks. You may also use this sampling procedure for sand asphalt base or surface courses.

NOTE: When sampling hot mix asphalt concrete mixtures, ensure that the samples accurately represent the materials being produced.

1. Sampling

To take sample from trucks:

- a. Prepare a sampling area in the truck by shoveling off the cone of the material until you create a flat area at least 60 percent of the width of the truck and at least 6 in (150 mm) deep.
 - 1) Take samples with a square-nosed shovel.
 - 2) If the truck contains more than one cone, take samples from different cones. For example, take the first sample from the first cone, the second sample from the second cone, etc.
- b. Take a sample from the full width of the flattened area so that the sample will weigh 25 to 30 lbs (11.34 to 13.6 kg) (about 3 or 4 shovels-full of material). Take the sample from a uniform depth at approximately a minimum depth of 3 times the nominal particle size for the type mix being sampled, striking off a vertical face for each shovel of material obtained for testing.
- c. Place all the material into a bucket lined with a sample bag. Taking care to place the 3 or 4 shovels full of material in the bucket lined with a sample bag one on top of the other.
- d. If you need to take second or third samples, use the same procedures to take them from the areas immediately adjacent to the original sampling area.

To take samples from the roadway:

- e. Divide the roadway spreader width into 3 sections.
- f. Wait until approximately 1/2 of the load has been dumped from the truck.
- g. Use a square-nosed shovel to take a 25 to 30 lb (11.34 to 13.6kg) sample from each section.
 - 1) Remove material for the total depth of the pavement course.
 - 2) Place all the material in a sample bag or bucket lined with a sample bag.

2. Quartering (See description below)

- a. **Transport the sample to the quartering table.** In one swift motion, invert the bucket and/or bag on the center of the table. Remove the bag and/or bucket straight up in a manner to leave the composite sample in a symmetrical, cone-shaped pile in the center of the table.
- b. **Sampling stands with the quartering table attached** requires the sample taken to be placed in a container/bucket lined with a cloth bag and placed onto the quartering table, *do not take the sample from the haul vehicle and place it directly onto the quartering table with the shovel.*
- c. **Quarter with a quartering device.** With a vertical motion, insert the device straight down into the pile with very slight twisting movement on the vertical axis of the quartering device until the device is firmly resting on the table with no large particles under the device.
- d. **First Quarter:** Remove opposite quarters from the table and retain in a suitable container.
- e. **Second Quarter:** Quarter again to split the remaining undisturbed quarters.
- f. All material removed from the first and second “reducing quarters” should be retained as referee sample material as prescribed in GSP-21.
- g. **Third Quarter:** Quarter the remaining undisturbed quarters. Two opposing sections of the pile are combined to serve as the test specimen, while the remaining opposite quarters are labeled and retained as a Comparison Sample in accordance with GSP-21.

NOTE: Care should be taken each time the sample is “quartered” to ensure that each fraction of the sample is relatively the same size as its counterpart. (Final Results: Sample size should be within the minimum and maximum sample weight of the mix being produced.) The sample should not be mixed once it is placed on the table. If any discrepancies in sampling are noted, notify the TMOS for instruction.

- h. Ensure that the mix weight meet the minimum and maximum sample weight requirement:

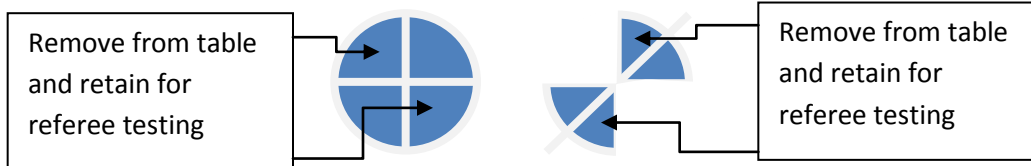
Table A

Superpave Mix	Min. Sample Weight lbs (g)	Max. Sample Weight lbs (g)
25 mm Superpave	5.5 (2500)	7.7 (3500)
19 mm Superpave	4.4 (2000)	6.6 (3000)
12.5 mm Superpave	3.3 (1500)	5.5 (2500)
9.5 mm Superpave	2.6 (1200)	4.9 (2200)
4.75 mm Mix	2.2 (1000)	4.4 (2000)
9.5 mm OGFC	2.2 (1000)	4.4 (2000)
12.5 mm OGFC	2.6 (1200)	4.9 (2200)
12.5 mm PEM	2.6 (1200)	4.9 (2200)
19 mm SMA	4.4 (2000)	6.6 (3000)
12.5 mm SMA	3.3 (1500)	5.5 (2500)
9.5 mm SMA	2.6 (1200)	4.9 (2200)

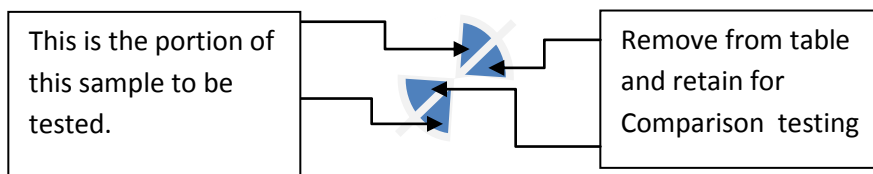
Quartering method

First Quarter

Second Quarter



Final Quarter



If you cut a core on in-place material for your sample of asphaltic concrete mixtures, ensure the cores meet the minimum and maximum size requirements In Table A, [GDT 125](#) and [GDT 83](#).

Take all samples of Asphaltic Concrete “OGFC or PEM” mixtures from trucks at the plant as soon after loading as possible, using the following procedure:

- a. Take samples with a preheated scoop (place the scoop in the hot mixture to preheat).
- b. Prepare a sampling area in the truck by shoveling off the cone of material until you create a flat area at least 60 percent of the width of the truck and at least 6 in (150 mm) deep.
- c. Scoop a sample by starting at one side of the prepared area and moving horizontally across the area until you get a sample between 2.2 and 4.4 lbs (1000 - 2000g) for 9.5mm OGFC, 2.6 and 4.9 lbs (1200 - 2200g) for 12.5mm OGFC or PEM.

NOTE: Do not quarter OGFC or PEM samples.

- d. Place the Asphaltic Concrete “OGFC or PEM” sample in a hot melt box (hot or cooled) or in a cloth or plastic bag once material has cooled.
- e. Send the sample to the [Office of Materials and Research](#) for analysis.