
Standard Practice for Sampling Asphalt Mixtures

AASHTO Designation: R 97-19 (2024)¹

First Published: 2019

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Technical Subcommittee: 2c, Asphalt–Aggregate Mixtures



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1.	SCOPE
1.1.	This standard practice covers the procedures for sampling of asphalt mixtures at point of manufacture, storage, or delivery. Samples obtained by this procedure may be used as representative samples of asphalt mixtures to determine compliance with requirements of the specifications under which the asphalt mixture is furnished.
1.2.	<i>This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations before use.</i>
2.	REFERENCED DOCUMENTS
2.1.	<i>AASHTO Standards:</i> ■ R 10, Definition of Terms Related to Quality and Statistics as Used in Highway Construction ■ R 67, Sampling Asphalt Mixtures after Compaction (Obtaining Cores)
3.	SIGNIFICANCE AND USE
3.1.	<i>Importance of Proper Sampling:</i>
3.1.1.	Sampling is as important as testing. Use care to obtain samples that are representative of the material.
3.1.2.	Avoid segregation and contamination of the material during sampling.
3.2.	<i>Sampling Requirements:</i>
3.2.1.	Many different sampling locations and techniques are covered in this standard, exercise care that samples are obtained according to the appropriate requirements.
3.2.2.	Use R 67 for sampling from compacted asphalt mixtures.
4.	APPARATUS
4.1.	<i>Sampling Containers</i> —Such as cardboard boxes, metal pails/buckets, stainless steel bowls or pans, or other containers as approved.

- 4.2. *Mechanical Sampling Systems*—A permanently attached device that allows a sample receptacle to pass perpendicularly through the entire stream of material or diverts the entire stream of material into the container by manual, hydraulic, or pneumatic operation.
- 4.3. *Shovels or Metal Scoops, or Other Equipment*—Square-head metal shovels at least 125 mm (5.5 in.) wide.
- 4.4. *Belt Template*—A pair of templates either joined to each other or separate which are the shape and width of the asphalt mixture stream belt. If the two templates are joined, enough space must be allowed between the templates to yield an increment of the required mass.
- 4.5. *Sampling Plate*—Thick metal plate, minimum 8 gauge, sized to accommodate sample size requirements, with a wire long enough to reach from the center of the paver to the outside of the farthest auger extension attached to one corner. Each corner of the plate should have 6 mm (0.25 in.) diameter holes.
- 4.6. *Cookie Cutter Sampling Device*—Formed steel angle with two 100 mm by 150 mm by 9 mm (4 in. by 6 in. by 0.375 in.) handles, sized to accommodate sample size requirements; minimum 50 mm (2 in.) smaller than the sampling plate when used together.
- 4.6.1. *Example:* Sampling plate 380 mm (15 in.) square and a cookie cutter sampling device 330 mm (13 in.) square.
- 4.7. *Release Agent*—A non-stick product that prevents the asphalt mixture from sticking to the apparatus and does not contain solvents or petroleum-based products that could affect asphalt binder properties.

5. PROCEDURE

- 5.1. *General:*
- 5.1.1. Inspect the material to determine the uniformity. Select sample locations using a random sampling procedure or a stratified random sampling procedure meeting the definitions in R 10, or as otherwise specified. Select a minimum of three sample locations to represent the material being tested.
- 5.1.2. Take care to prevent contamination of asphalt mixture samples by dust or other foreign matter.
- 5.2. *Sample Size*—Sample size depends on the test method(s) to be performed. Obtain sufficient quantity of material to perform all testing.
- 5.3. *Sample Containers:*
- 5.3.1. Ensure the container(s) and sampling equipment are clean and dry before sampling.
- 5.3.2. Use cardboard boxes, metal containers, or other acceptable containers for dense-graded mixture samples.
- 5.3.3. Use stainless steel bowls or pans for hot open-graded mixture samples. Cool the open-graded mixture until the asphalt binder will not migrate from the aggregate before storing it in containers made from absorbent materials.
- 5.4. *Sampling Using Attached Sampling Devices:*