

METHODS OF SAMPLING AND TESTING
MT 113-04
MEASURING THE TEXTURE DEPTH OF
PORTLAND CEMENT CONCRETE PAVEMENT
(Modified AASHTO T 261)

1 Scope:

- 1.1 This method describes the procedure for measuring texture depth of fresh or hardened concrete by using a tire tread depth gauge.
- 1.2 The values stated in SI units are to be regarded as the standard.

2 Referenced Documents:

2.1 AASHTO:

T 261 Measuring Texture Depth of Portland Cement Concrete Using a Tire Tread Depth Gauge

3 Apparatus:

- 3.1 *Tire Tread Depth Gauge* – A tire tread depth gauge with 1 mm (1/32 in.) graduations similar to the one shown in Figure 1. The gauge end may be modified to a shape suitable for the measurement.
- 3.2 Wire or stiff bristle brush, carborundum stone.
- 3.3 Steel straightedge approximately 6 by 25 by 300 mm (1/4 by 1 by 12 in.)
- 3.4 30 m (100 ft.) tape.

4 Selection of Test Locations:

- 4.1 The lot size represented by the testing shall be as required by the specifying agency.
- 4.2 The lot shall be subdivided into five approximately equal sublots and one test area location shall be selected for each subplot at random. The random location shall be identified transversely and longitudinally.

5 Procedure:

- 5.1 Document the nature and purpose of the measurement (inspection of new construction, condition survey, safety review, etc.); include the date of measurement, test area location, the position within the lane (wheelpath or outside wheelpath), whether the concrete is fresh (plastic), hardened without traffic, or approximate time that the pavement has been opened to traffic. Note whether the texture was constructed by grinding or tining.
- 5.2 At each test area measure the texture depth of 10 consecutive grooves. The test location of each groove shall be in line perpendicular to the grooves, starting at the point randomly located in accordance with Section 4.2.
- 5.3 The texture depth shall be measured from the original concrete surface. Any projections above the original surface shall be removed by brushing with a wire brush or carborundum stone as necessary to remove ridges adjacent to grooving, or with the steel straightedge prior to taking a measurement on hardened concrete. If measurements are being made on fresh concrete, the depth gauge guide shall be pressed down to the level of the original concrete surface.

5 Procedure: (continued)

5.4 With the depth gauge guides in contact with the original concrete surface, the plunger is depressed until contact is made with the bottom of the groove in the concrete. The gauge is then removed without disturbing the plunger. The texture depth is read to the nearest 1 mm (1/32 in.) on the calibrated plunger. The plunger is then zeroed and the procedure is repeated until all measurements are completed.

6 Calculations:

6.1 Calculate the average groove depth for each of the five sublots.

6.2 Calculate the average groove depth for each lot to the nearest 1 mm (1/32 in.).

7 Report:

7.1 The report shall indicate the lot identification and the average groove depth to the nearest 1 mm (1/32 in.).

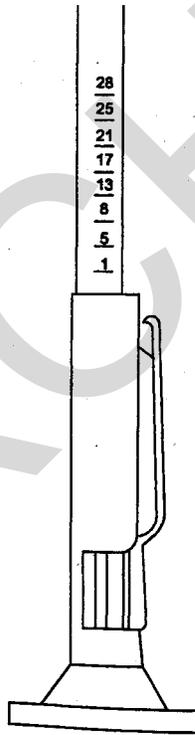


Figure 1—Depth Measuring Gauge