1. SCOPE

1.1 This test method covers the procedure to evaluate the texture of a micro-milled pavement surface.

1.2 This Item may involve hazardous materials, operations, and equipment and may not address all of the safety problems associated with the use of the test method. The user of the test method is responsible for establishing appropriate safety and health practices and determining the applicability of regulatory limitations prior to use.

1.3 The values stated in either SI metric or acceptable US Customary units are to be regarded separately as standard, as appropriate for a specification with which this method is used. Within the text, US Customary units are shown in parenthesis. The values stated in each system shall be used independently of the other, without combining values in any way.

2. REFERENCED DOCUMENTS

2.1 AASHTO Standards.

M 247 Glass Beads Used In Traffic Paints.

2.2 ASTM Standards

E 1272 Standard Specification for Laboratory Glass Graduated Cylinders.

3. TERMINOLOGY. Terms and abbreviations shall be in accordance with the Department’s Standard Specifications, Section 101.

4. SIGNIFICANCE AND USE. This test method is used to determine the texture of a micro-milled pavement surface prior to an overlay.

5. APPARATUS

5.1 Filler. Type 1 glass beads meeting the requirements of AASHTO M 247.

5.2 Spreader. A flat, stiff hard disk made from methyl methacrylate (acrylic glass) with a thickness of 13 ± 3 mm (0.5 ± 0.1 in.), diameter of 200 ± 50 mm (8 ± 2 in.) and a round handle affixed in the center used to spread the filler.

5.3 Graduated Cylinder. A class B or better, style III, 250 mL capacity graduated cylinder meeting the requirements of ASTM E 1272, used to measure the volume of filler for the test.
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5.4 **Brushes.** A stiff wire brush and a soft bristle brush used to clean the pavement.

5.5 **Container.** A small container with a secure and easily removable cover used to store 200 ml of filler.

5.6 **Screen.** A shield used to protect the test area from air turbulence by the wind or traffic.

6. **PREPARATION.**

6.1 Prepare one container with 200 ml of filler for each sample location.

6.2 Fill the graduated cylinder to the specified volume.

6.3 Gently tap the side of the graduated cylinder to level the surface of the filler.

6.4 Place the measured volume of filler in the container.

6.5 Label the container with the type and quantity of filler.

7. **PROCEDURE**

7.1 The Engineer shall determine the sample location on the milled pavement surface.

7.2 Inspect the sample location and ensure the location is a dry, homogeneous site, free of unique or localized features such as cracks, joints, stripping and patching.

7.3 If localized features are present, move forward at the same transverse offset until a suitable site is located.

7.4 Clean the sample location using the brushes to remove any residue, debris or loosely bonded material.

7.5 Place the screen on the milled pavement surface to protect the sample location from air turbulence.

7.6 Hold the container with filler above the pavement at the sample location at a height not greater than 100 mm (4 inch).

7.7 Pour the measured volume of filler from the container onto the milled pavement surface into a conical pile.

7.8 Place the spreader lightly on top of the conical pile of filler being careful not to compact the filler.

7.9 Move the spreader in a slow, circular motion to disperse the filler in a circular area and to create a defined crest around the perimeter.

7.10 Continue spreading the filler until the filler is well dispersed and the spreader rides on top of the high points of the milled pavement surface.

7.11 Measure and record the diameter of the circular area four times, at intervals of 45° and to the nearest 5 mm (1/8 inch).

7.12 Measure the diameter of the circular area from the crest of the slope on one side, through the center, and to the crest of the slope on the other side of the circular area.

7.13 Calculate the average diameter of the circular area covered by the filler.

7.14 Determine the microtexture ratio of the milled pavement surface by using the formula below.
8. CALCULATIONS

8.1 Calculate the average diameter of the circular area covered by the filler.

\[ Da = \frac{(D_1 + D_2 + D_3 + D_4)}{4} \]

Where:
Da = average diameter of the filler area.
D1, D2, D3, D4 = diameters of the filler area, mm or inch.

8.2 Use the following Formula to calculate the micro texture ratio (MTR).

For Metric Units:
MTR = (Da *0.0174) – 1.886

Where:
Da = average diameter of the filler area, mm.

For US Customary Units:
MTR = (Da *0.435) – 1.886

Where:
Da = average diameter of the filler area, inch.

* Minimum acceptable microtexture ratio will be 5.0.

9. REPORTING

9.1 Report the microtexture ratio on form BR 359.