

GDT 72

A. Scope

For a complete list of GDTs, see the Table of Contents.

Use this test method to determine the average texture depth of a selected portion of a concrete pavement surface when burlap or broom finishing is specified.

B. Apparatus

The apparatus consists of the following:

1. Sand Spreading Tool—Use a 2-1/2 in (63 mm) diameter, flat wooden disc with a 1/16 in (1.6 mm) thick, hard rubber disc of the same diameter attached to one face and a short dowel serving as a handle attached to the other face.
2. Metal Cylinder—Use a volume of 1.5 in³ (24,581 mm³) as calibrated with a burette reading to the nearest hundredth of an inch (1 milliliter).
3. Natural Silica Sand—You must use sand from Ottawa, Illinois, graded to pass a No. 50 (300 μm) sieve and retained on a No. 100 (150 μm) sieve.
4. Ruler—Use a ruler 12 in (300 mm) long with markings in divisions of every 0.1 in (1 mm) (ER0070).
5. Wire Brush and Soft Hand Brush.

C. Sample Size and Preparation

1. Fill the cylinder to the top with dry sand.
2. Gently tap the base of the cylinder three times on a rigid surface.
3. Add more sand to fill the cylinder again to the top and level the top with a straightedge.

D. Procedures

1. Select dry pavement for the test.
 - a. If the concrete pavement has not had traffic, scrub the test surface with a wire brush to remove any loosely bonded particles or curing compounds that are worn away by traffic.
 - b. Otherwise, sweep the pavement surface with a soft hand brush.
2. Pour the measured weight of sand on the test surface.
3. Spread the sand with a rubber disc spreading tool into a circular patch with the surface depressions filled to the level of the peaks.
 - a. Keep the sand spreading tool flat on the surface and move it in a circular motion.
 - b. Avoid losing sand, especially during windy conditions.
4. Measure the diameter of the sand patch at four or more equally spaced locations.
5. Record to the nearest 0.1 in (1 mm).

Note: Do not reuse the sand for another test.
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E. Calculations

[Table 1](#) was prepared using the equation:

$$T = 4V \div D$$

where:

V = Volume of metal cylinder average

D = Diameter of sand patch

T = Average texture depth

Table 1—Conversion Table

D = Sand Patch Diameter (inches) T = Texture Depth (Inches)

D	T	D	T
4.0	0.119	8.0	0.030
4.1	0.113	8.1	0.029
4.2	0.108	8.2	0.028
4.3	0.103	8.3	0.028
4.4	0.098	8.4	0.027
4.5	0.094	8.5	0.026
4.6	0.090	8.6	0.026
4.7	0.086	8.7	0.025
4.8	0.083	8.8	0.025
4.9	0.080	8.9	0.024
5.0	0.077	9.0	0.024
5.1	0.074	9.1	0.023
5.2	0.071	9.2	0.023
5.3	0.068	9.3	0.022
5.4	0.065	9.4	0.022
5.5	0.063	9.5	0.021
5.6	0.061	9.6	0.021
5.7	0.059	9.7	0.020
5.8	0.057	9.8	0.020
5.9	0.055	9.9	0.019
6.0	0.053	10.0	0.019
6.1	0.051	10.1	0.019
6.2	0.050	10.2	0.018
6.3	0.048	10.3	0.018
6.4	0.047	10.4	0.018
6.5	0.045	10.5	0.017
6.6	0.044	10.6	0.017
6.7	0.043	10.7	0.017
6.8	0.041	10.8	0.016
6.9	0.040	10.9	0.016
7.0	0.039	11.0	0.016
7.1	0.038	11.1	0.016
7.2	0.037	11.2	0.015
7.3	0.036	11.3	0.015
7.4	0.035	11.4	0.015
7.5	0.034	11.5	0.014
7.6	0.033	11.6	0.014
7.7	0.032	11.7	0.014
7.8	0.031	11.8	0.013
7.9	0.031	11.9	0.013

F. Report

The paving inspector shall report the results and location of sand patch tests for a random location on each day's pour in the Remarks section of Form 319 revised.