

A. Scope

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

This test provides a method of determination of the uniformity of the bituminous application for asphaltic concrete or surface treatment paving.

B. Apparatus

You may use either of the two methods below to determine uniformity.

Method A

1. Strip of Insulation—Has an aluminum backing 8 in (200 mm) wide with a length at least equal to the width of the bituminous application (air conditioner filter media).
2. Metal Plate—4 in x 10 in (100 mm x 250 mm) metal plate for a straight edge.
3. Knife
4. Scales—Have 0.1 gram graduations, accuracy of 0.1 gram.
5. Metal Plates—Three 20 gauge metal plates 8 in x 12 in (200 mm x 300 mm).
6. Masking Tape
7. Double-Faced Carpet Tape
8. Roll of Wrapping Paper

Method B

1. Metal Plates—Approximately 2 in x 2 in (50 mm x 50 mm) of 20 gage (0.953 mm) metal.
2. Tray—Use to wash plates with kerosene or fuel oil.
3. Film—Thickness film thickness gage capable of measuring from 0 to 60 mils (1.5 mm) in increments of 5 mils (0.127 mm).

C. Sample Size and Preparation

No sample preparation is needed.

D. Procedures

You may use either of the two methods below to determine uniformity.

Method A

1. Determine the weight of a 4 in x 8 in (100 mm x 200 mm) section of the insulation strip covered with a 4 in x 10 in (100 mm x 250 mm) layer of wrapping paper. This is done by weighing a 24 in (600 mm) length of the insulation and not less than 20 in (500 mm) of the wrapping paper.
2. Place the insulation strip across the roadway at right angles to the centerline, a tangent location that is to be covered with the bitumen.
3. Tape the 8 in x 12 in (200 mm x 300 mm) metal plates to the aluminum bottom of the insulation strip with double faced tape to hold it in position.
4. Allow the distributor to cross the insulation strips it passes during the spraying of the bitumen at a prescribed rate.
5. Remove the insulation strip from the roadway onto one side of a length of wrapping paper.
6. Cut the insulation strip up in 4 in (100 mm) strips and trim the wrapping paper covering so that a 4 in x 10 in (100 mm x 250 mm) cover remains over the sample.
7. Fold the wrapping paper enclosed insulation strip up in the maximum length which can be transported easily and remove it to the laboratory.

8. Cut the insulation strip up in 4 in (100 mm) strips and trim the wrapping paper covering so that a 4 in x 10 in (100 mm x 250 mm) cover remains over the sample.
9. Weigh the individual specimen and determine the net weight of bitumen collected.
10. The net weight of bitumen in grams will be the approximate rate of spread in .01 gal per square yard (0.045 L/m^2), but compute a factor for each bituminous material (emulsion).

Method B

1. Place the plates at various locations in front of the distributor. Ensure that the placement is such that the wheels of the distributor will not displace the plates. You may drop plates in front of the spray bar while the distributor is in operation.
2. Allow the asphalt spray to cover the plates.
3. Make 6 thickness measurements with the film thickness gage at random locations across the road.

E. Calculations

No calculations are needed.

F. Report

Record the individual values and the mean of the measurements in the shot record book.