



WSDOT Test Method T 923

Thickness Measurement of Geotextiles

1. SCOPE
 - a. This test method provides procedures for measuring the thickness of geotextiles.
2. SUMMARY OF METHOD
 - a. Specimens from the geotextile sample submitted for testing are measured for thickness and the average of those measurements is used as the multiplier in converting permittivity to permeability. The measured thickness is reported as information only in case disagreements arise concerning the permeability of the material.
3. APPARATUS
 - a. The thickness measurement instrument shall be a precision electronic micrometer conforming to ASTM D 1777-64
 - b. The specimen cutting template shall meet the requirements of ASTM D 4491 for cutting the specimens to size.
4. SPECIMENS FOR TESTING
 - a. Specimens shall be cut from the sample submitted for testing in the pattern and number specified in ASTM D 4491.
5. CONDITIONING
 - a. Thickness testing shall be done prior to conditioning the specimens for permeability testing.
6. PROCEDURE
 - a. Handle the specimens carefully to avoid altering the natural state of the material.
 - b. Turn the machine on and allow it to warm up for approximately five minutes. As the machine cycles, clean presser foot and base by inserting a clean, lint free cloth between presser foot and base while in the raised position. Carefully and gently pull the cloth from between presser foot and base as the foot is in lowered position. Allow the machine to cycle for several readings and if no variation, zero machine with the zero set knob. Repeat cleaning and zeroing process a second time to ensure the base and foot are clean.
 - c. As the machine cycles to a raised presser foot position, (with a zero reading) quickly but carefully insert the sample under the presser foot in a centered position.
 - d. The machine will cycle presser foot down. Record the reading of the first cycle only. Record the reading to 0.00030 in. (0.01 mm).

- e. When the machine cycles up remove the sample and allow the machine to cycle with no sample. Check for zero reading. If machine does not read zero repeat cleaning procedure b.
- f. Continue to measure the remaining specimens using these same procedures.
- g. Average the readings and record the results.
- h. Report the average reading on the worksheet for permeability testing as the nominal thickness of the geotextile.

7. CALIBRATION

- a. The thickness measuring micrometer shall be calibrated in accordance with the manufacturers' directions once a year, and will be checked accuracy on the first working day of each month. Accuracy shall be within 0.00030 in. (0.01 mm).