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**Test Method for
Measuring Thickness
of Automotive
Textiles and Plastics**

SAE Recommended Practice
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Ø TEST METHOD FOR MEASURING THICKNESS OF AUTOMOTIVE TEXTILES AND PLASTICS

1. SCOPE:

This test is designed to measure the thickness of relatively flat textiles, plastics, and similar materials.

2. APPARATUS REQUIRED:

2.1 A dead weight type of dial micrometer capable of accurately measuring to 0.025 mm. The pressure foot shall have a diameter of:

- 76.2 mm for testing tufted floor covering.
- 28.7 mm for testing felts and other nonwovens.
- 6.35 mm for testing bodycloth¹.
- 6.35 mm for testing unsupported vinyl film and coated fabrics.

2.2 The pressure foot and connected parts shall be weighted to apply to a total load of:

- 340 g for testing tufted floor coverings.
- 283 g for testing felts and other nonwovens.
- 85 g for testing bodycloth¹.
- 85 g for testing unsupported vinyl film and coated fabrics.

¹When measuring the overall thickness of three dimensional materials, the thickness shall be determined by calculating the average of three readings taken on the high points of the material.

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3. TEST SPECIMENS:

Cut three test specimens approximately 100 x 100 mm from the center and two opposite sides of the roll. Unless otherwise specified, samples shall be taken no nearer the selvage edge than one-tenth the width of the material, or nearer than 300 mm from either end of the roll. If the material does not come in rolls, the sample should be taken from the most representative areas.

4. PROCEDURE:

Condition the samples at $23 \pm 2^\circ\text{C}$ and $50 \pm 5\%$ relative humidity for 24 h. Raise the pressure foot of the thickness gage and place the sample on the base. Gently lower the pressure foot and after 10 s read the thickness of the dial micrometer. Repeat in two additional areas and record the average thickness of all three test specimens.

The phi (ϕ) symbol is for the convenience of the user in locating areas where technical revisions have been made to the previous issue of the report. If the symbol is next to the report title, it indicates a complete revision of the report.