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SURFACE VEHICLE RECOMMENDED PRACTICE

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Submitted for recognition as an American National Standard

TEST METHOD FOR MEASURING THE RELATIVE DRAPEABILITY OF FLEXIBLE INSULATION MATERIALS

***Foreword*—**This Reaffirmed Document has been changed only to reflect the new SAE Technical Standards Board Format.

1. ***Scope*—**This SAE Recommended Practice describes a method of determining the relative flexibility of padding and/or acoustical composites.

1.1 **Purpose—**The purpose of this testing method is to establish a means for measuring the three-dimensional drapeability of flexible insulation materials, such as automotive floor pan insulation composites.

2. ***References*—**There are no references specified herein.

3. ***Apparatus***

3.1 **Cylinder—**Inside diameter 305 mm (12 in), length 305 mm (12 in).

3.2 **Clamps—**Hoffman, screw compressor, open side—maximum opening 19 mm (0.75 in).

3.3 **Scale—**610 mm (24 in) minimum—graduated in millimeters or 0.01 in.

3.4 **Chocks—**Any type capable of preventing the cylinder from rolling.

4. ***Test Specimen*—**From the material to be tested, cut a 610 mm x 610 mm (24 in x 24 in) specimen.

5. ***Conditioning***

5.1 Test for material classification and for arbitration purposes shall be made on material conditioned to a constant weight in a controlled atmosphere of 21 °C ± 1 °C (70 °F ± 2 °F) and 50% ± 5% relative humidity. Quality control tests can be conducted on unconditioned specimens unless otherwise specified by the user.

5.2 Lay the specimen on a flat surface for a minimum of 24 h before conducting the test.

6. ***Procedure***

6.1 Lay the cylinder horizontally on top of a table, using the chocks to prevent rolling of the cylinder. See Figure 1.

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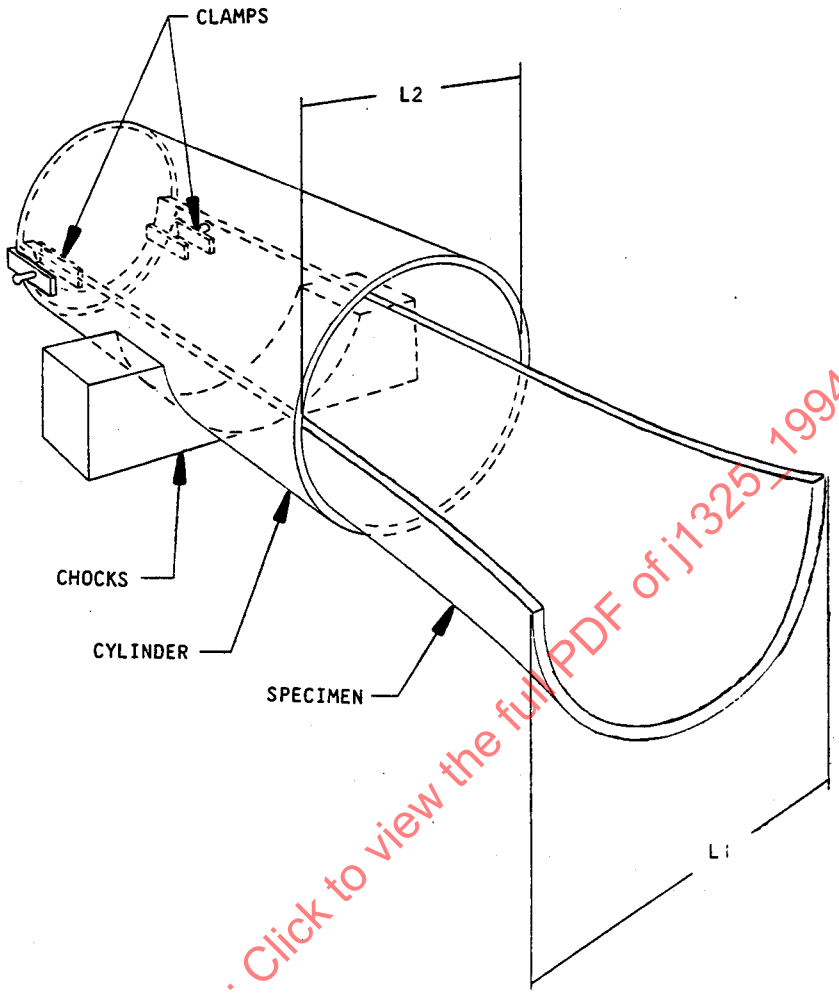

FIGURE 1—DRAPEABILITY APPARATUS

6.2 Place the specimen in the interior of the cylinder, matching one end of the specimen with the end of the cylinder.

6.3 Orient the specimen so that the surface which would face toward the supporting structure in the proposed application faces downward in the cylinder.

6.4 Smooth the specimen against the inner circumference of the cylinder, making sure the sides of the specimen are equidistant from the base of the cylinder.

6.5 Securely clamp the corners of the specimen, at the flush end, to the cylinder. See Figure 1.

6.6 The specimen should protrude 305 mm (12 in) out of the other end of the cylinder.

6.7 Measure the distance (outside dimension) between the corners of the protruding portion of the specimen. Record this distance as L_1. See Figure 1.

6.8 Measure the distance (outside dimension) from edge to edge of the specimen at the end of the cylinder. Record this distance as L_2. See Figure 1.

6.9 Rotate the specimen 90 degrees in the same plane and repeat 6.1 to 6.8.

7. ***Report—***Calculate the percent drape and record the results. Use Equation 1 for calculation:

$$D = \frac{L_1 - L_2}{L_2} \times 100 \qquad \text{(Eq. 1)}$$

where:

D = % drape
L_1 = measurement taken in 6.7
L_2 = measurement taken in 6.8

PREPARED BY THE SAE SOUND AND HEAT INSULATION COMMITTEE