



Standard Test Method for Microcellular Urethanes—Flexural Recovery¹

This standard is issued under the fixed designation D 3768; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reappraisal. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reappraisal.

1. Scope

1.1 This test method covers the procedure and apparatus for measuring the flexural recovery of microcellular urethanes.

1.2 The values stated in SI units are to be regarded as the standard.

1.3 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

NOTE 1—There is no similar or equivalent ISO standard to this test method.

2. Referenced Documents

2.1 ASTM Standards:

D 3040 Practice for Preparing Precision Statements for Standards Related to Rubber and Rubber Testing²

E 691 Practice for Conducting an Interlaboratory Study to Determine the Precision of a Test Method³

3. Significance and Use

3.1 This test method is used to indicate the ability of a material to recover after a 180° bend around a 12.7-mm (0.5-in.) diameter mandrel at room temperature.

3.2 Before proceeding with this test method, reference should be made to the specification of the material being tested. Any test specimen preparation, conditioning, or dimensions, or combination thereof, and testing parameters covered in the materials specification shall take precedence over those mentioned in these test methods. If there are no material specifications, then the default conditions apply.

NOTE 2—This test method may be applied to solid urethanes.

4. Apparatus

4.1 *Flexural Recovery Test Fixture*—See Fig. 1.

¹ This test method is under the jurisdiction of ASTM Committee D-20 on Plastics and is the direct responsibility of Subcommittee D20.22 on Cellular Materials—Plastics and Elastomers.

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This revision includes the addition of the following: an ISO equivalency statement, a materials specification statement, and a keyword section.

² Discontinued—see 1986 Annual Book of ASTM Standards, Vols 09.01 and 09.02.

³ Annual Book of ASTM Standards, Vol 14.02.

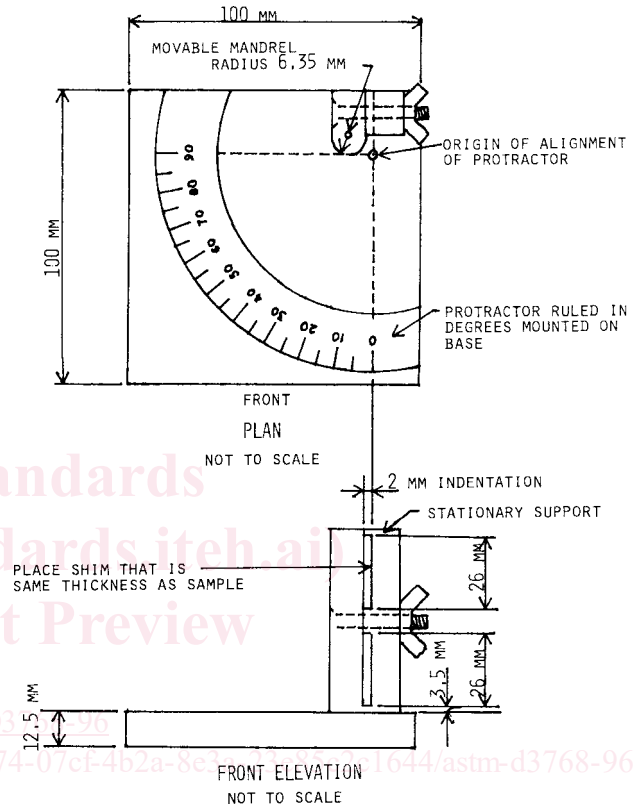


FIG. 1 Fixture for Flexural Recovery Test

4.2 *Timer*, capable of indicating seconds.

4.3 *Thickness Indicator*, accurate to 0.25 mm.

5. Test Specimens

5.1 The test specimens shall be die cut from molded plaques or parts. The specimen size shall be 25 mm in width by 150 mm in length (1 by 6 in.). The recommended standard test specimen is 4 mm in thickness. Thinner specimens may be used, but shall not be less than 3 mm.

6. Conditioning

6.1 Unless otherwise specified, condition the specimens and fixtures a minimum of 1 h at $23 \pm 2^\circ\text{C}$ and $50 \pm 5\%$ relative humidity before testing.

7. Procedure

7.1 There shall be at least three recovery measurements.