Designation: D 956 – 87

AMERICAN SOCIETY FOR TESTING AND MATERIALS
1916 Race St., Philadelphia, Pa. 19103
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Standard Practice for COMPRESSION MOLDING TEST SPECIMENS OF AMINO MOLDING COMPOUNDS[1]

This standard is issued under the fixed designation D956; 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 reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This practice covers procedures for molding test specimens of impact, flexure, tensile, and water absorption from urea-formaldehyde compounds and melamine-formaldehyde compounds.

1.1.1 *Cellulose-Filled Urea and Melamine Materials:*

Impact test specimens, 12.7 by 12.7 by 127 mm (½ by ½ by 5 in.)

Flexural test specimens, 6.4 by 12.7 by 127 mm (¼ by ½ by 5 in.)

Water-absorption specimens, 51 by 3.2-mm (2 by ⅛-in.) disk.

1.1.2 *Shock-Resistant Melamine Materials:*

Impact test specimens, 12.7 by 12.7 by 127 mm (½ by ½ by 5 in.)

Flexural test specimens, 6.4 by 12.7 by 127 mm (¼ by ½ by 5 in.)

Tension test specimens, "dog-bone" specimens shown in Fig. 2 of ASTM Method D651, Test for Tensile Strength of Molded Electrical Insulating Materials.[2]

1.2 The values stated in SI units are to be regarded as the standard. The values in parentheses are given for information only.

1.3 *This standard may involve hazardous materials, operations, and equipment. This standard does not purport to address all of the safety problems 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.*

2. Referenced Documents

2.1 *ASTM Standards:*

D638 Test Method for Tensile Properties of Plastics[2]

D647 Practice for Design of Molds for Test Specimens of Plastic Molding Materials[2]

D651 Test Method for Tensile Strength of Molded Electrical Insulating Materials[3]

D704 Specification for Melamine-Formaldehyde Molding Compounds[2]

D705 Specification for Urea-Formaldehyde Molding Compounds[2]

D958 Practice for Determining Temperatures of Standard ASTM Molds for Test Specimens of Plastics[2]

3. Significance and Use

3.1 The conditions under which samples are molded influence the properties of the specimens. In determining whether a given compound meets the specification requirements, it is important to hold to a standard set of conditions. This is also necessary for a valid comparison of properties obtained with different compounds, or between different batches of the same compound.

3.2 If the molded specimens show evidence of low density areas due to trapped gases, the specimens should be discarded. A breathe step should be used in molding new specimens. It is critical to hold to a relatively brief breathe cycle to avoid precuring the granules before full pressure is applied. That would result in poorly knitted areas and lower strength in the molded specimen.

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[1] This practice is under the jurisdiction of ASTM Committee D-20 on Plastics and is the direct responsibility of Subcommittee D-20.09 on Specimen Preparations.

Current edition approved Sept. 25, 1987. Published November 1987. Originally published as D956 – 48 T. Last previous edition D956 – 51 (1981).

[2] *Annual Book of ASTM Standards*, Vol 08.01.

[3] *Annual Book of ASTM Standards*, Vol 10.01.