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Standard Practice for COMPRESSION MOLDING TEST SPECIMENS OF STYRENE- BUTADIENE MOLDING AND EXTRUSION MATERIALS¹

This standard is issued under the fixed designation D 2292; 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 practice covers the compression molding of plaques or test specimens of styrene-butadiene molding and extrusion materials as defined in Specification D 1892.

1.2 The values stated in SI units, as detailed in Standard E 380, are to be regarded as the standard.

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 whoever uses this standard to consult and establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Applicable Documents

2.1 ASTM Standards:

D 618 Methods of Conditioning Plastics and Electrical Insulating Materials for Testing²

D 1693 Test Method for Environmental Stress-Cracking of Ethylene Plastics³

D 1892 Specification for Styrene-Butadiene Molding and Extrusion Materials³

E 380 Standard for Metric Practice⁴

3. Significance and Use⁵

3.1 The method by which samples are molded influences the mechanical properties of the specimen. The Izod impact-test values for compression-molded specimens are known to be lower, but were less subject to variation than are values for injection-molded specimens. There is evidence of a relationship between the properties of compression-molded specimens and those of extruded specimens.

4. Apparatus

4.1 Molds:

4.1.1 *Molding Chase*—A “picture-frame” compression-molding chase having a blanked-out area of suitable size (Note 1) and capable of producing a plaque 3.2 ± 0.13 mm (0.125 ± 0.005 in.) thick. Dimensions are shown in Fig. 1 of Test Method D 1693, for a molding chase to produce 152.4 by 152.4-mm (6 by 6-in.) plaques.

NOTE 1—A 152.4 by 152.4-mm (6 by 6-in.) blanked-out section has been found satisfactory.

4.1.2 *Molding Plates*—Two polished chromium-plated ferrotype plates (dimensions shown in Fig. 1 of Test Method D 1693) such as used in photography, at least 1.0 mm (0.040 in.) thick, and of adequate surface area to cover the molding chase.

4.1.3 *Cavity Mold*⁶—A cavity-type flash mold capable of producing a plaque of the specified dimensions may be used. Alternative test specimens may be molded to their finished dimensions, exclusive of the notch for impact strength, in a multi-cavity compression-molding chase.

4.1.4 *Aluminum Foil*—Same size as molding plates (4.1.2) and 0.1 mm (0.004 in.) thick.

¹ This practice is under the jurisdiction of ASTM Committee D-20 on Plastics and is the direct responsibility of Subcommittee D20.09 on Specimen Preparation.

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

³ *Annual Book of ASTM Standards*, Vol 08.02.

⁴ *Annual Book of ASTM Standards*, Vol 14.02.

⁵ A study of compression-molding temperature effects on high-impact polystyrene properties may be obtained from ASTM Headquarters. Request RR:D20-1003.

⁶ Blueprint of detailed drawing for construction of this mold is available at a nominal cost from ASTM Headquarters.