H-59-03

Designation: D 3027 – 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 ALLYL MOLDING COMPOUNDS[1]

This standard is issued under the fixed designation D 3027; 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 the procedure to be used for compression molding the test specimens required for Specification D 1636.

1.2 The values stated in SI units are to be regarded as 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:*

D 647 Practice for Design of Molds for Test Specimens of Plastic Molding Materials[2]

D 958 Practice for Determining Temperatures of Standard ASTM Molds for Test Specimens of Plastic[2]

D 1636 Specification for Allyl Molding Compounds[3]

D 2863 Test Method for Measuring the Minimum Oxygen Concentration to Support Candle-Like Combustion of Plastics (Oxygen Index)[3]

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 procuring the granules before full pressure is applied. Such a condition would result in poorly knitted areas and lower strength in the molded specimen.

4. Apparatus

4.1 *Molds*: (See Notes 1 and 2)

4.1.1 *Impact, Flexural, Flame Resistance, and Oxygen Index Specimens*—Use the single bar, single cavity, positive mold shown in the figure illustrating the Single Bar, Single Cavity Positive Mold in Practice D 647. The test specimens for the Test Method D 2863 oxygen index test shall be molded to a 3.2 mm (⅛ in.) thickness and cut to a 6.4 mm (¼ in.) width.

4.1.2 *Electrical Test Specimens*—Use the 101.6-mm (4-in.) diameter positive mold shown in the figure illustrating the Mold for Disk Test Specimens in Practice D 647.

NOTE 1—The molds shown in Practice D 647 are hand molds. For ease of molding, they may be made semi-automatic by bolting them to the press platens.

NOTE 2—Chrome plating of the cavities is recommended but not necessary.

4.2 *Press*—The hydraulic press shall be such

[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. Current edition approved Aug. 28, 1987. Published October 1987. Originally published as D 3027 – 72. Last previous edition D 3027 – 72 (1981)[ε1].

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

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