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Standard Test Method for CHEMICAL RESISTANCE OF THERMOSET MOLDING COMPOUNDS USED IN THE MANUFACTURE OF MOLDED FITTINGS¹

This standard is issued under the fixed designation D 3615; 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 test method provides a means for measuring the resistance of press-molded thermoset molding materials to various chemical reagents for a specified period of time at both room temperature and elevated temperatures.

1.2 This test method includes provisions for reporting changes in appearance and flexural strength of exposed test specimens.

1.3 Standard reagents are specified to establish results on a comparable basis.

1.4 The values stated in inch-pound units are to be regarded as the standard. The SI values in parentheses are for information purposes only.

1.5 *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 618 Methods of Conditioning Plastics and Electrical Insulating Materials for Testing²

D 790 Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials²

3. Significance and Use

3.1 This test method indicates only the general degree of chemical resistance expected of

thermoset molding materials in a nondeflected condition. The results obtained should not by themselves be used to predict the service life of molded fittings in various chemical environments.

4. Apparatus

4.1 *Micrometers*, capable of measuring dimensions of test specimens to 0.001 in. (0.02 mm).

4.2 *Room or Enclosed Space* capable of being maintained at the Standard Laboratory Atmosphere, as described in Methods D 618.

4.3 *Containers*—Suitable containers for immersing specimens in chemical reagents. The containers used must be resistant to the corrosive effects of the reagents being used and capable of being vented when testing volatile materials at elevated temperatures.

4.4 *Oven or Constant-Temperature Bath*, capable of maintaining temperature within $\pm 3.6^\circ\text{F}$ (2°C) of the specified test temperature.

4.5 *Testing Machine*—A properly calibrated testing machine, loading noses, and supports meeting the requirements specified in the Apparatus section of Test Methods D 790.

¹ This test method is under the jurisdiction of ASTM Committee D-20 on Plastics, and is the direct responsibility of Subcommittee D20.23 on Reinforced Plastic Piping Systems and Chemical Equipment.

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