



Designation: D704 – 99(Reapproved 2004)

Standard Specification for Melamine-Formaldehyde Molding Compounds¹

This standard is issued under the fixed designation D704; 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.

This standard has been approved for use by agencies of the Department of Defense.

1. Scope*

1.1 This specification covers compression molding, thermosetting, melamine-formaldehyde molding compounds as further defined in 4.1, resin binder, with or without other resins, intimately combined with fillers, pigments, and any chemical agents needed.

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

NOTE 1—The properties included in this specification are those required to identify the types of molding compounds covered. There may be other requirements necessary to identify particular characteristics. These will be added to the specification as their inclusion becomes generally desirable and the necessary test data and methods become available. Transfer or injection molding will usually result in different physical and electrical characteristics than compression molding.

NOTE 2—ISO 2122-1977(E) is similar but not equivalent to this specification. Product classification and characterization are not equivalent.

2. Referenced Documents

2.1 ASTM Standards:²

- D149 Test Method for Dielectric Breakdown Voltage and Dielectric Strength of Solid Electrical Insulating Materials at Commercial Power Frequencies
- D150 Test Methods for AC Loss Characteristics and Permittivity (Dielectric Constant) of Solid Electrical Insulation
- D256 Test Methods for Determining the Izod Pendulum Impact Resistance of Plastics
- D495 Test Method for High-Voltage, Low-Current, Dry Arc Resistance of Solid Electrical Insulation
- D570 Test Method for Water Absorption of Plastics
- D618 Practice for Conditioning Plastics for Testing
- D648 Test Method for Deflection Temperature of Plastics Under Flexural Load in the Edgewise Position

- D731 Test Method for Molding Index of Thermosetting Molding Powder
 - D790 Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials
 - D792 Test Methods for Density and Specific Gravity (Relative Density) of Plastics by Displacement
 - D883 Terminology Relating to Plastics
 - D1895 Test Methods for Apparent Density, Bulk Factor, and Pourability of Plastic Materials
 - D1896 Practice for Transfer Molding Test Specimens of Thermosetting Compounds
 - D3638 Test Method for Comparative Tracking Index of Electrical Insulating Materials
 - D3795 Test Method for Thermal Flow, Cure, and Behavior Properties of Pourable Thermosetting Materials by Torque Rheometer
 - D3892 Practice for Packaging/Packing of Plastics
 - D5224 Practice for Compression Molding Test Specimens of Thermosetting Molding Compounds
 - D6289 Test Method for Measuring Shrinkage from Mold Dimensions of Molded Thermosetting Plastics
- ### 2.2 ASTM Manual:
- Manual 7A Manual on Presentation of Data and Control Chart Analysis, Seventh Edition³
- ### 2.3 ISO Standard:
- ISO 2122-1977(E) Plastics—Aminoplastic Molding Materials—Specification⁴

3. Terminology

3.1 *Definitions*—For definitions of technical terms pertaining to plastics used in this specification see Terminology D883.

4. Classification

4.1 The molding compounds covered by this specification shall be designated by types, based upon their principal characteristics and the fillers used.

¹ This specification is under the jurisdiction of ASTM Committee D20 on Plastics and is the direct responsibility of Subcommittee D20.16 on Thermosetting Materials.

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² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

³ Available from ASTM International Headquarters. Request MNL7A.

⁴ Available from American National Standards Institute (ANSI), 25 W. 43rd St., 4th Floor, New York, NY 10036.

*A Summary of Changes section appears at the end of this standard