



Designation: D 704 – 99

Standard Specification for Melamine-Formaldehyde Molding Compounds¹

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1. Scope *

1.1 This specification covers compression molding, thermo-setting, 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:

- D 149 Test Method for Dielectric Breakdown Voltage and Dielectric Strength of Solid Electrical Insulating Materials at Commercial Power Frequencies²
- D 150 Test Methods for A-C Loss Characteristics and Permittivity (Dielectric Constant) of Solid Electrical Insulating Materials²
- D 256 Test Method for Determining the Pendulum Impact Resistance of Notched Specimens of Plastics³
- D 495 Test Method for High-Voltage, Low-Current, Dry Arc Resistance of Solid Electrical Insulation²
- D 570 Test Method for Water Absorption of Plastics²
- D 618 Practice for Conditioning Plastics for Testing³
- D 648 Test Method for Deflection Temperature of Plastics Under Flexural Load³
- D 731 Test Method for Molding Index of Thermosetting Molding Powder³

D 790 Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials³

D 792 Test Methods for Density and Specific Gravity (Relative Density) of Plastics by Displacement³

D 883 Terminology Relating to Plastics²

D 1895 Test Methods for Apparent Density, Bulk Factor, and Pourability of Plastic Materials³

D 1896 Practice for Transfer Molding Test Specimens of Thermosetting Compounds³

D 3638 Test Method for Comparative Tracking Index of Electrical Insulating Materials⁴

D 3795 Test Method for Thermal Flow and Cure Properties of Thermosetting Plastics by Torque Rheometer⁵

D 3892 Practice for Packaging/Packing of Plastics⁶

D 5224 Practice for Compression Molding Test Specimens of Thermosetting Molding Compounds⁷

D 6289 Test Method for Measuring Shrinkage from Mold Dimensions of Molded Thermosetting Plastics⁷

2.2 ASTM Special Technical Publication:

STP 15 D Manual on Quality Control of Materials⁸

2.3 ISO Standard:

ISO 2122-1977(E) Plastics—Aminoplastic Molding Materials—Specification⁹

3. Terminology

3.1 *Definitions*—For definitions of technical terms pertaining to plastics used in this specification see Terminology D 883.

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.

4.1.1 *Type 1*—General-purpose compound with cellulose filler, available in colors, white, and black. Suitable for general, mechanical, and electrical applications.

¹ This specification is under the jurisdiction of ASTM Committee D-20 on Plastics and is the direct responsibility of Subcommittee D20.16 on Thermosetting Materials.

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² *Annual Book of ASTM Standards*, Vol 10.01.

³ *Annual Book of ASTM Standards*, Vol 08.01.

⁴ *Annual Book of ASTM Standards*, Vol 10.02.

⁵ *Annual Book of ASTM Standards*, Vol 10.03.

⁶ *Annual Book of ASTM Standards*, Vol 08.02.

⁷ *Annual Book of ASTM Standards*, Vol 08.03.

⁸ Available from ASTM Headquarters. Request PCN 04-015030-34.

⁹ Available from American National Standards Institute, 11 W. 42nd St., 13th Floor, New York, NY 10036.

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