



Standard Specification for ACETAL RESIN INJECTION MOLDING AND EXTRUSION MATERIALS¹

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1. Scope

1.1 This specification covers two types of acetal resin materials suitable for injection molding or extrusion, or both.

2. Applicable Documents

2.1 ASTM Standards:

- D 150 Tests for A-C Loss Characteristics and Permittivity (Dielectric Constant) of Solid Electrical Insulating Materials²
- D 618 Conditioning Plastics and Electrical Insulating Materials for Testing²
- D 638 Test for Tensile Properties of Plastics²
- D 648 Test for Deflection Temperature of Plastics Under Flexural Load²
- D 792 Tests for Specific Gravity and Density of Plastics by Displacement²
- D 1238 Test for Flow Rates of Thermoplastics by Extrusion Plastometer²
- D 1898 Recommended Practice for Sampling of Plastics²
- D 3892 Practice for Packaging/Packing of Plastics²
- E 11 Specification for Wire-Cloth Sieves for Testing Purposes³
- G 23 Recommended Practice for Operating Light- and Water-Exposure Apparatus (Carbon-Arc Type) for Exposure of Non-metallic Materials²

3. Classification

3.1 This specification covers the following two types of acetal resins, classified according to melt flow:

3.1.1 *Type I*—Material for injection molding.

3.1.2 *Type II*—Material for extrusion.

3.2 The two types are subdivided into

classes according to applications as follows:

3.2.1 *Class A*—Natural color only, containing an antioxidant, for general purpose use. Applicable to Types I and II.

3.2.2 *Class B*—Black, containing carbon black pigment, for weather-resistant uses. Applicable only to Type I.

3.2.3 *Class C*—Natural, containing a light stabilizer, for weather-resistant uses. Applicable only to Type I.

4. Physical Requirements

4.1 The resins described in this specification shall be free of foreign matter to such a contamination level as may be agreed upon between the purchaser and the seller.

4.2 Additives:

4.2.1 Types I and II, Class A shall contain an antioxidant.

4.2.2 Type I, Class B shall contain a concentration of uniformly dispersed, high-color carbon black.

4.2.3 Type I, Class C shall contain a concentration of light stabilizer.

4.3 *Color*—Unless otherwise specified the acetal resin shall contain no color pigment.

4.4 *Form*—The acetal resin shall be in the form of pellets and shall contain a surface lubricant when specified by agreement between the purchaser and the seller.

4.5 Specific gravity, melting point, and melt flow rate shall be as specified in Table 1.

¹ This specification is under the jurisdiction of ASTM Committee D-20 on Plastics and is the direct responsibility of Subcommittee D20.15 on Thermoplastic Materials.

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² Annual Book of ASTM Standards, Part 35.

³ Annual Book of ASTM Standards, Part 41.