



Designation: D6778 – 20

Standard Classification System and Basis for Specification for Polyoxymethylene Molding and Extrusion Materials (POM)¹

This standard is issued under the fixed designation D6778; 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 U.S. Department of Defense.

1. Scope*

1.1 This classification system covers polyoxymethylene materials suitable for molding and extrusion. This classification system allows for the use of polyoxymethylene plastic materials that are recycled, reconstituted, recycled-regrind, recovered, or reprocessed, or combination thereof, provided that the requirements as stated in this specification are met. It is the responsibility of the supplier and the buyer of recycled, reconstituted, recycled-regrind, recovered, or reprocessed polyoxymethylene plastic materials, or combination thereof, to ensure compliance. (See Guide [D7209](#)).

1.2 The properties included in this standard are those required to identify the compositions covered. Other requirements necessary to identify particular characteristics important to specialized applications are to be specified by using suffixes as given in Section [5](#).

1.3 This classification system and subsequent line callout (specification) are intended to provide a means of calling out plastic materials used in the fabrication of end items or parts. It is not intended for the selection of materials. Material selection can be made by those having expertise in the plastic field only after careful consideration of the design and the performance required of the part, the environment to which it will be exposed, the fabrication process to be employed, the costs involved, and the inherent properties of the material other than those covered by this standard.

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

1.5 The following precautionary caveat pertains only to the test method portion, Section [11](#), of this classification system. *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

¹ This classification is under the jurisdiction of ASTM Committee [D20](#) on Plastics and is the direct responsibility of Subcommittee [D20.15](#) on Thermoplastic Materials.

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NOTE 1—This classification system is similar to ISO 29988-1/-2, although the technical content is significantly different.

1.6 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Referenced Documents

2.1 ASTM Standards:²

[D618 Practice for Conditioning Plastics for Testing](#)

[D883 Terminology Relating to Plastics](#)

[D1600 Terminology for Abbreviated Terms Relating to Plastics](#)

[D3892 Practice for Packaging/Packing of Plastics](#)

[D4000 Classification System for Specifying Plastic Materials](#)

[D5630 Test Method for Ash Content in Plastics](#)

[D7209 Guide for Waste Reduction, Resource Recovery, and Use of Recycled Polymeric Materials and Products \(Withdrawn 2015\)](#)³

[D6100 Specification for Extruded, Compression Molded and Injection Molded Polyoxymethylene Shapes \(POM\)](#)

[E29 Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications](#)

2.2 ISO Standards:⁴

[ISO 75-1 Plastics—Determination of Temperature of Deflection under Load—Part 1: General Test Method](#)

[ISO 75-2 Plastics—Determination of Temperature of Deflection under Load—Part 2: Plastics and Ebonite](#)

[ISO 179-1 Plastics—Determination of Charpy Impact Properties—Part 1: Non-instrumented Impact Test](#)

[ISO 294-1 Plastics—Injection Moulding of Test Specimens of Thermoplastic Materials—Part 1: General Principles](#)

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 The last approved version of this historical standard is referenced on www.astm.org.

⁴ Available from American National Standards Institute (ANSI), 25 W. 43rd St., 4th Floor, New York, NY 10036, <http://www.ansi.org>.

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