



Designation: D8366 – 21a

Standard Specification for Extruded and Compression Molded Shapes Made from Unfilled Poly(Vinylidene Fluoride) PVDF¹

This standard is issued under the fixed designation D8366; 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 specification covers the requirements and test methods for the material, dimensions, workmanship, and the properties of extruded sheet, rod and tubular bar manufactured from unfilled PVDF.

1.2 This specification covers the requirements and test methods for the material, dimensions, workmanship, and the properties of extruded and compression molded shapes manufactured from unfilled PVDF.

1.3 The properties included in this specification are those required for shapes made from PVDF polymers. Requirements necessary to identify particular characteristics of the shape are included in Section 5.

1.4 This specification allows for the use of up to 20 % process regrind and reprocessed plastic, total, and of uncontaminated quality.

1.5 The values stated in English Units are to be regarded as the standard in all property and dimensional tables. For reference purposes, SI units are also included.

1.6 The following safety hazards caveat pertains only to the test method or test methods described in this specification. *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.*

1.7 *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

- D256 Test Methods for Determining the Izod Pendulum Impact Resistance of Plastics
- D618 Practice for Conditioning Plastics for Testing
- D638 Test Method for Tensile Properties of Plastics
- 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
- D1600 Terminology for Abbreviated Terms Relating to Plastics
- D3222 Specification for Unmodified Poly(Vinylidene Fluoride) (PVDF) Molding Extrusion and Coating Materials
- D3418 Test Method for Transition Temperatures and Enthalpies of Fusion and Crystallization of Polymers by Differential Scanning Calorimetry
- D3835 Test Method for Determination of Properties of Polymeric Materials by Means of a Capillary Rheometer
- D3892 Practice for Packaging/Packing of Plastics
- D4000 Classification System for Specifying Plastic Materials
- D5575 Classification System for Copolymers of Vinylidene Fluoride (VDF) with Other Fluorinated Monomers

3. Terminology

3.1 Definitions:

3.1.1 For definitions of terms used in this specification and associated with plastics issues refer to the terminology contained in Terminology D883.

3.2 Definitions of Terms Specific to This Standard:

3.2.1 *copolymer, n*—a polymer made by the reaction of two or more different monomers with units of more than one kind.

¹ This test method 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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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.

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