



Standard Specification for Rigid Poly (Vinyl Chloride) (PVC) Exterior Profiles Used for Fencing and Railing¹

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1. Scope

1.1 This specification establishes requirements for the material properties and physical properties, including dimensional tolerances, extrusion quality, and weatherability, of rigid poly vinyl-chloride (PVC) exterior profiles used for agricultural, commercial, residential fencing and railing. Methods for testing and for identifying exterior profile extrusions that comply with this specification are also provided.

NOTE 1—Information with regard to application, assembly, and installation should be obtained from the manufacturer or in accordance with Practice F1999, or both.

NOTE 2—Loadbearing characteristics for fence and railing assemblies are not addressed within this specification (for example, windload, horizontal or vertical guardrail loading).

1.2 The material used in these exterior profiles is limited to rigid poly (vinyl chloride) (PVC) compounds in a single homogeneous extrusion or in a coextrusion of two or more PVC compounds in distinct layers.

1.3 The values stated in inch-pound units are to be regarded as the standard. The values in parentheses are provided for information only.

1.4 *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 and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 *ASTM Standards:*²

D618 Practice for Conditioning Plastics for Testing

D635 Test Method for Rate of Burning and/or Extent and Time of Burning of Plastics in a Horizontal Position

¹ This specification is under the jurisdiction of ASTM Committee F14 on Fences and is the direct responsibility of Subcommittee F14.30 on Rigid Polymer Fence Systems.

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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.

D696 Test Method for Coefficient of Linear Thermal Expansion of Plastics Between –30°C and 30°C with a Vitreous Silica Dilatometer

D883 Terminology Relating to Plastics

D1435 Practice for Outdoor Weathering of Plastics

D1600 Terminology for Abbreviated Terms Relating to Plastics

D1898 Practice for Sampling of Plastics (Withdrawn 1998)³

D2565 Practice for Xenon-Arc Exposure of Plastics Intended for Outdoor Applications

D4216 Specification for Rigid Poly(Vinyl Chloride) (PVC) and Related PVC and Chlorinated Poly(Vinyl Chloride) (CPVC) Building Products Compounds

D4226 Test Methods for Impact Resistance of Rigid Poly(Vinyl Chloride) (PVC) Building Products

D4726 Specification for Rigid Poly(Vinyl Chloride) (PVC) Exterior-Profile Extrusions Used for Assembled Windows and Doors

F1999 Practice for Installation of Rigid Poly(Vinyl Chloride) (PVC) Fence Systems

G154 Practice for Operating Fluorescent Ultraviolet (UV) Lamp Apparatus for Exposure of Nonmetallic Materials

3. Terminology

3.1 *General*—Definitions are in accordance with Terminologies D883 and D1600, unless otherwise indicated.

3.2 *Definitions of Terms Specific to This Standard:*

3.2.1 *capstock*—the outer layer in a coextrusion exposed to weathering.

3.2.2 *coextrusion*—the process of coextruding profiles from two or more concentric streams of PVC compounds.

NOTE 3—Separate PVC materials may be coextruded to form a multi-layered profile with each layer having different physical characteristics such as strength and weathering.

3.2.3 *color-hold guidelines*—predictive target color regions within a three-dimensional model which constitute acceptable appearance retention levels of color change resulting from weathering of specific product type and color.

³ The last approved version of this historical standard is referenced on www.astm.org.