



# Standard Specification for Smooth-Wall Poly(Vinyl Chloride) (PVC) Plastic Underdrain Systems for Highway, Airport, and Similar Drainage<sup>1</sup>

This standard is issued under the fixed designation F758; 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 for smooth-wall perforated and nonperforated poly(vinyl chloride) (PVC) plastic pipe and couplings for use in subsurface drainage systems of highways, airports, and similar applications in nominal sizes of 4, 6, and 8 in. and in pipe stiffnesses (PS) that are designated as Type PS 28 and Type PS 46 in accordance with its minimum pipe stiffness.

1.2 Molded fittings for use with highway underdrain pipe are in accordance with Specification [D3034](#). For convenience, some of these fittings are reproduced in [Annex A1](#).

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

NOTE 1—Type PS 28 and Type PS 46 indicate “pipe stiffness” of 28 and 46, respectively, as outlined in [11.1](#).

NOTE 2—Pipe and fittings should be installed in accordance with Practice [D2321](#), or applicable state or local specifications.

1.4 The following safety hazards caveat pertains only to the test methods portion, Section [11](#), of 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 and health practices and determine the applicability of regulatory limitations prior to use.*

## 2. Referenced Documents

### 2.1 ASTM Standards:<sup>2</sup>

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

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

[D1784](#) Specification for Rigid Poly(Vinyl Chloride) (PVC) Compounds and Chlorinated Poly(Vinyl Chloride) (CPVC) Compounds

[D2122](#) Test Method for Determining Dimensions of Thermoplastic Pipe and Fittings

[D2152](#) Test Method for Adequacy of Fusion of Extruded Poly(Vinyl Chloride) (PVC) Pipe and Molded Fittings by Acetone Immersion

[D2321](#) Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications

[D2412](#) Test Method for Determination of External Loading Characteristics of Plastic Pipe by Parallel-Plate Loading

[D2444](#) Test Method for Determination of the Impact Resistance of Thermoplastic Pipe and Fittings by Means of a Tup (Falling Weight)

[D2564](#) Specification for Solvent Cements for Poly(Vinyl Chloride) (PVC) Plastic Piping Systems

[D2855](#) Practice for Making Solvent-Cemented Joints with Poly(Vinyl Chloride) (PVC) Pipe and Fittings

[D3034](#) Specification for Type PSM Poly(Vinyl Chloride) (PVC) Sewer Pipe and Fittings

[D3212](#) Specification for Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals

[D4396](#) Specification for Rigid Poly(Vinyl Chloride) (PVC) and Chlorinated Poly(Vinyl Chloride) (CPVC) Compounds for Plastic Pipe and Fittings Used in Nonpressure Applications (Withdrawn 2015)<sup>3</sup>

[F402](#) Practice for Safe Handling of Solvent Cements, Primers, and Cleaners Used for Joining Thermoplastic Pipe and Fittings

[F412](#) Terminology Relating to Plastic Piping Systems

### 2.2 Federal Standard:

[Fed. Std. No. 123](#) Marking for Shipments (Civil Agencies)<sup>4</sup>

### 2.3 Military Standard:

[MIL-STD-129](#) Marking for Shipment and Storage<sup>4</sup>

<sup>1</sup> This specification is under the jurisdiction of ASTM Committee [F17](#) on Plastic Piping Systems and is the direct responsibility of Subcommittee [F17.65](#) on Land Drainage.

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<sup>2</sup> For referenced ASTM standards, visit the ASTM website, [www.astm.org](http://www.astm.org), or contact ASTM Customer Service at [service@astm.org](mailto:service@astm.org). For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

<sup>3</sup> The last approved version of this historical standard is referenced on [www.astm.org](http://www.astm.org).

<sup>4</sup> DLA Document Services Building 4/D 700 Robbins Avenue Philadelphia, PA 19111-5094 <http://quicksearch.dla.mil/>.