



# Standard Specification for Primers for Use in Solvent Cement Joints of Poly(Vinyl Chloride) (PVC) Plastic Pipe and Fittings<sup>1</sup>

This standard is issued under the fixed designation F 656; 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 ( $\epsilon$ ) indicates an editorial change since the last revision or reapproval.

## 1. Scope

1.1 This specification covers requirements for primers for use with poly(vinyl chloride) (PVC) pipe and fittings that are to be joined by PVC solvent cements meeting the requirements of Specification **D 2564**.

1.2 These primers are used in pressure and nonpressure applications with plain end pipe and either socket-type fittings or bell end pipe. These primers prepare the surface of pipe and fittings before the application of solvent cement. The primer's effect on the set and cure time of the joint is dependent on the cement, pipe size, application method, temperature, and humidity.

1.3 A procedure for using the primer with cement is given in Practice **D 2855**.

1.4 The text of this specification references notes, footnotes, and appendixes which provide explanatory material. These notes and footnotes (excluding those in tables and figures) shall not be considered as requirements of the specification.

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

1.6 The following safety hazards caveat pertains only to the test methods portion, Section 6, 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:

**D 1600** Terminology for Abbreviated Terms Relating to Plastics<sup>2</sup>

**D 1784** Specification for Rigid Poly(Vinyl Chloride) (PVC) Compounds and Chlorinated Poly(Vinyl Chloride) (CPVC) Compounds<sup>2</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 F17.20 on Joining. Current edition approved Sept. 10, 2002. Published October 2002. Originally published as F 656 – 80. Last previous edition F 656 – 96a.

<sup>2</sup> *Annual Book of ASTM Standards*, Vol 08.01.

**D 2564** Specification for Solvent Cements for Poly(Vinyl Chloride) (PVC) Plastic Piping Systems<sup>3</sup>

**D 2855** Practice for Making Solvent-Cemented Joints with Poly(Vinyl Chloride) (PVC) Pipe and Fittings<sup>3</sup>

**F 402** Practice for Safe Handling of Solvent Cements, Primers, and Cleaners Used for Joining Thermoplastic Pipe and Fittings<sup>3</sup>

**F 412** Terminology Relating to Plastic Piping Systems<sup>3</sup>

**F 493** Specification for Solvent Cements for Chlorinated Poly(Vinyl Chloride) (CPVC) Plastic Pipe and Fittings<sup>3</sup>

### 2.2 NSF Standards:

Standard No. 14 for Plastic Piping Components and Related Materials<sup>4</sup>

Standard No. 61 for Drinking Water Systems Components—Health Effects<sup>4</sup>

## 3. Terminology

3.1 *Definitions*—Definitions are in accordance with Terminology **F 412**, and abbreviations are in accordance with Terminology **D 1600**, unless otherwise specified.

## 4. Material Requirements

4.1 The primer shall be an organic liquid with water-like viscosity and shall not contain any undissolved particles.

4.2 The solvent system to be used in the formulation of this primer is not specified.

NOTE 1—If required for identification purposes, colorants shall be used in the primer. It is recommended that orange not be used, since this is the recommended color for CPVC solvent cement covered under Specification **F 493**.

## 5. Detail Requirements

5.1 *Dissolving Ability*—The primer shall be capable of dissolving at least 10 % by weight of PVC resin at  $73.4 \pm 3.6^\circ\text{F}$  ( $23 \pm 2^\circ\text{C}$ ) within 60 min, as specified in 5.1. The PVC resin shall be a resin used to make poly(vinyl chloride) molding or extrusion compound meeting the requirements of Class 12454-B, as classified in Specification **D 1784**.

<sup>3</sup> *Annual Book of ASTM Standards*, Vol 08.04.

<sup>4</sup> Available from the National Sanitation Foundation, P.O. Box 1468, Ann Arbor, MI 48106.