



Standard Specification for Solvent Cements for Transition Joints Between Acrylonitrile- Butadiene-Styrene (ABS) and Poly(Vinyl Chloride) (PVC) Non-Pressure Piping Components¹

This standard is issued under the fixed designation D3138; 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 provides general requirements for solvent cements used in joining acrylonitrile-butadiene-styrene (ABS) plastic pipe or fittings to poly(vinyl chloride) (PVC) plastic pipe or fittings.

1.2 These cements are intended for use in cementing transition joints between ABS and PVC materials in non-pressure applications only (25 psi (170 kPa) or less).

NOTE 1—This specification was developed to provide a means for joining an ABS non-pressure piping system using a solvent-cemented transition joint, for example, joining ABS building drain to a PVC sewer system. The intention was not to create a specification for an all purpose ABS-PVC solvent cement that would be used for mixing of ABS and PVC piping materials nor to specify a cement that could generally be used for either material. Specific cements for ABS or PVC components should be used (see 1.3).

1.3 Solvent cements used for joining PVC pipe and fittings are specified in Specification [D2564](#). Solvent cements used for joining ABS pipe and fittings are specified in Specification [D2235](#).

1.4 A recommended procedure for joining ABS to PVC pipe and fittings for non-pressure applications is given in the appendix.

1.5 The values stated in inch-pound units are to be regarded as standard. The values given in parentheses are mathematical conversions to SI units that are provided for information only and are not considered standard.

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.*

¹ 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.

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2. Referenced Documents

2.1 ASTM Standards:²

[D1084](#) Test Methods for Viscosity of Adhesives

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

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

[D2235](#) Specification for Solvent Cement for Acrylonitrile-Butadiene-Styrene (ABS) Plastic Pipe and Fittings

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

[D2661](#) Specification for Acrylonitrile-Butadiene-Styrene (ABS) Schedule 40 Plastic Drain, Waste, and Vent Pipe and Fittings

[D2665](#) Specification for Poly(Vinyl Chloride) (PVC) Plastic Drain, Waste, and Vent Pipe and Fittings

[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

[F493](#) Specification for Solvent Cements for Chlorinated Poly(Vinyl Chloride) (CPVC) Plastic Pipe and Fittings

3. Terminology

3.1 *Definitions*—Definitions are in accordance with Terminology [F412](#), and abbreviations are in accordance with Terminology [D1600](#), unless otherwise specified.

4. Materials and Manufacture

4.1 The solvent cement shall be a solution of Class 12454-B, unplasticized poly(vinyl chloride) molding or extrusion compound as classified in Specification [D1784](#), or equivalent PVC resin.

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.