



Standard Specification for Thermoplastic Well Casing Pipe and Couplings Made in Standard Dimension Ratios (SDR), SCH 40 and SCH 80¹

This standard is issued under the fixed designation F480; 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 water well casing pipe and couplings made from thermoplastic materials in standard dimension ratios (SDR), SCH 40 and SCH 80.

1.2 Specifications are provided for the application of these materials to water well and ground water monitoring applications. Flush threaded joint systems are included for screen and casing used primarily in the construction of ground water monitoring wells (see Practice [D5092](#)).

1.3 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. (See [IEEE/ASTM SI 10](#).)

NOTE 1—Certain field conditions may require alternative materials to ensure safe long-term use. The user should consult federal, state, and local codes governing the use of thermoplastic materials for well casing or monitor pipe.

NOTE 2—This standard specifies dimensional, performance and test requirements for plumbing and fluid handling applications, but does not address venting of combustion gases.

1.4 Although the pipe sizes and SDR values listed in this specification are generally available, numerous other plastic pipes in Schedule 40 and 80 wall, other SDR values and various outside diameters have been used for well casing. Such products are often selected because they fulfill certain needs and [Annex A1](#) includes a list of these Plastic Pipe Well Casing Specials.

1.5 The following safety hazards caveat pertains only to the test method 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:²

- [D618 Practice for Conditioning Plastics for Testing](#)
- [D638 Test Method for Tensile Properties of Plastics](#)
- [D653 Terminology Relating to Soil, Rock, and Contained Fluids](#)
- [D1527 Specification for Acrylonitrile-Butadiene-Styrene \(ABS\) Plastic Pipe, Schedules 40 and 80 \(Withdrawn 2013\)³](#)
- [D1600 Terminology for Abbreviated Terms Relating to Plastics](#)
- [D1784 Specification for Rigid Poly\(Vinyl Chloride\) \(PVC\) Compounds and Chlorinated Poly\(Vinyl Chloride\) \(CPVC\) Compounds](#)
- [D1785 Specification for Poly\(Vinyl Chloride\) \(PVC\) Plastic Pipe, Schedules 40, 80, and 120](#)
- [D1892 Specification for Styrene-Butadiene Molding and Extrusion Materials \(Withdrawn 1987\)³](#)
- [D1898 Practice for Sampling of Plastics \(Withdrawn 1998\)³](#)
- [D2122 Test Method for Determining Dimensions of Thermoplastic Pipe and Fittings](#)
- [D2235 Specification for Solvent Cement for Acrylonitrile-Butadiene-Styrene \(ABS\) Plastic Pipe and Fittings](#)
- [D2241 Specification for Poly\(Vinyl Chloride\) \(PVC\) Pressure-Rated Pipe \(SDR Series\)](#)
- [D2282 Specification for Acrylonitrile-Butadiene-Styrene \(ABS\) Plastic Pipe \(Withdrawn 2006\)³](#)
- [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](#)

¹ This specification is under the jurisdiction of ASTM Committee [F17](#) on Plastic Piping Systems and is the direct responsibility of Subcommittee [F17.61](#) on Water.

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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.

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