



Standard Classification for Chemical Resistance of Poly(Vinyl Chloride) (PVC) Homopolymer and Copolymer Compounds and Chlorinated Poly(Vinyl Chloride) (CPVC) Compounds¹

This standard is issued under the fixed designation D 5260; 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.

1. Scope*

1.1 This classification covers the method for determining and classifying the resistance of poly(vinyl chloride) (PVC) homopolymer and copolymer compounds, and chlorinated poly(vinyl chloride) (CPVC) compounds in chemicals by simple immersion testing of unstressed specimens.

1.2 This classification is applicable to any PVC or CPVC compound as defined in Specifications D 1784, D 3915, D 4216, D 4396, or D 4551.

1.3 The values stated in SI units are to be regarded as standard.

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

1.5 *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.*

NOTE 1—There are no ISO standards covering the subject matter of this classification.

2. Referenced Documents

2.1 ASTM Standards:²

D 543 Test Method for Resistance of Plastics to Chemical Reagents

D 883 Terminology Relating to Plastics

D 1600 Terminology for Abbreviated Terms Relating to Plastics

¹ This classification is under the jurisdiction of ASTM Committee D20 on Plastics and is the direct responsibility of Subcommittee D20.15 on Thermoplastic Materials.

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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.

D 1784 Specification for Rigid Poly(Vinyl Chloride) (PVC) Compounds and Chlorinated Poly(Vinyl Chloride) (CPVC) Compounds

D 3915 Specification for Poly(Vinyl Chloride) (PVC) and Related Plastic Pipe and Fittings Compounds for Pressure Applications

D 4216 Specification for Rigid Poly(Vinyl Chloride) (PVC) and Related Plastic Building Products Compounds

D 4396 Specification for Rigid Poly(Vinyl Chloride) (PVC) and Related Plastic Compounds for Nonpressure Piping Products

D 4551 Specification for Poly(Vinyl Chloride) (PVC) Plastic Flexible Concealed Water-Containment Membrane

3. Terminology

3.1 Definitions and Abbreviations:

3.1.1 Definitions are in accordance with Terminology D 883 and abbreviations with Terminology D 1600 unless otherwise indicated.

4. Significance and Use

4.1 Reference this chemical resistance classification for any PVC/CPVC material compound specification wherein a level of resistance to specific chemicals is required for satisfactory product performance.

4.2 Listing of a chemical in the annex does not imply PVC/CPVC compatibility or resistance to the chemical. Some of the chemicals listed could be deleterious to a specific compound, causing radical changes in the physical properties. Resistance to these chemicals is not intended to be a practical requirement in a specification.

4.3 For resistance to mixtures of chemicals, it is suggested that the blend be tested rather than accepting the resistance of the individual chemicals because of a possible solvency enhancement of the combined chemicals.

4.4 The specimens tested in this classification are unstressed. When service conditions include stress or other factors, or both, test chemical resistance of the PVC/CPVC compound under actual service conditions.

*A Summary of Changes section appears at the end of this standard.