



Designation: D4376 – 15 (Reapproved 2020)

## Standard Specification for Vapor-Degreasing Grade Perchloroethylene<sup>1</sup>

This standard is issued under the fixed designation D4376; 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 vapor-degreasing grade perchloroethylene.<sup>2</sup>

NOTE 1—Guide D3844 and Practice D4276 provide additional important information on solvent properties.

1.2 The values stated in SI units are to be regarded as standard. No other units of measurement are included in this standard.

1.3 *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, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.4 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

### 2. Referenced Documents

2.1 *ASTM Standards:*<sup>3</sup>

D2108 Test Method for Color of Halogenated Organic Solvents and Their Admixtures (Platinum-Cobalt Scale)

D2109 Test Methods for Nonvolatile Matter in Halogenated Organic Solvents and Their Admixtures

D2111 Test Methods for Specific Gravity and Density of Halogenated Organic Solvents and Their Admixtures

<sup>1</sup> This specification is under the jurisdiction of ASTM Committee D26 on Halogenated Organic Solvents and Fire Extinguishing Agents and is the direct responsibility of Subcommittee D26.02 on Vapor Degreasing.

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<sup>2</sup> Contains inhibitors.

<sup>3</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.

D2942 Test Method for Total Acid Acceptance of Halogenated Organic Solvents (Nonreflux Methods)

D2988 Test Methods for Water-Soluble Halide Ion in Halogenated Organic Solvents and Their Admixtures

D2989 Test Method for Acidity-Alkalinity of Halogenated Organic Solvents and Their Admixtures

D3401 Test Methods for Water in Halogenated Organic Solvents and Their Admixtures

D3741 Test Methods for Appearance of Admixtures Containing Halogenated Organic Solvents

D3844 Guide for Labeling Chlorinated Hydrocarbon Solvent Containers (Withdrawn 2013)<sup>4</sup>

D4276 Practice for Confined Area Entry

D6806 Practice for Analysis of Halogenated Organic Solvents and Their Admixtures by Gas Chromatography

2.2 *Code of Federal Regulations:*<sup>5</sup>

49 CFR 100 to 199 Department of Transportation Hazardous Materials Regulations

29 CFR 1910.1200 Department of Labor, OSHA Regulations on Hazard Communications

### 3. Properties

3.1 Vapor-degreasing grade perchloroethylene shall conform to the requirements prescribed in Table 1.

### 4. Packaging and Package Marking

4.1 Package and label industrial or commercial quantities in accordance with DOT regulations 49 CFR 100 to 199, and in accordance with state and local regulations, and with OSHA regulations found in 29 CFR 1910.1200.

### 5. Keywords

5.1 perchloroethylene; tetrachloroethylene; vapor degreasing

<sup>4</sup> The last approved version of this historical standard is referenced on [www.astm.org](http://www.astm.org).

<sup>5</sup> Available from U.S. Government Publishing Office, 732 N. Capitol St., NW, Washington, DC 20401, <http://www.gpo.gov>.

**TABLE 1 Properties**

Property	Specification	Test Method
Specific gravity, 25/25 °C	1.606 to 1.625	D2111
Acidity (as HCl), weight, %, max	0.0005	D2989
Alkalinity (as NaOH), weight, %, max	0.030	D2989
Water, weight, %, max	0.0050	D3401
Appearance	Clear and free from suspended matter	D3741
Color, Pt-Co, max	20	D2108
Halide (as Cl <sup>-</sup> ), weight, %, max	0.0005	D2988
Nonvolatile residue, weight, %, max	0.0050	D2109
Acid acceptance, as NaOH, weight, %, min	0.10	D2942
Total impurities, weight, %, max	0.10	D6806

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