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Standard Specification for Vapor-Degreasing Grade Perchloroethylene[1]

This standard is issued under the fixed designation D 4376; 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 specification covers vapor-degreasing grade perchloroethylene.[2]

NOTE 1—Practices D 3844 and D 4276, and provide additional important information on solvent properties.

2. Referenced Documents

2.1 *ASTM Standards:*

D 1078 Test Method for Distillation Range of Volatile Organic Liquids[3]

D 2108 Test Method for Color of Halogenated Organic Solvents and Their Admixtures (Platinum-Cobalt Scale)[4]

D 2109 Test Methods for Nonvolatile Matter in Halogenated Organic Solvents and Their Admixtures[4]

D 2111 Test Methods for Specific Gravity of Halogenated Organic Solvents and Their Admixtures[4]

D 2942 Test Method for Total Acid Acceptance of Halogenated Organic Solvents (Nonreflux Method)[4]

D 2988 Test Method for Water-Soluble Halide Ion in Halogenated Organic Solvents and Their Admixtures[4]

D 2989 Test Method for Acidity-Alkalinity of Halogenated Organic Solvents and Their Admixtures[4]

D 3316 Test Method for Stability of Perchloroethylene with Copper[4]

D 3401 Test Method for Water in Halogenated Organic Solvents and Their Admixtures[4]

D 3741 Test Method for Appearance of Admixtures Containing Halogenated Organic Solvents[4]

D 3844 Practice for Labeling Halogenated Hydrocarbon Solvent Containers[4]

D 4276 Practice for Confined Area Entry[4]

2.2 *Other Documents:*

49 CFR 100 to 199 Department of Transportation Hazardous Materials Regulations[5]

29 CFR 1919.1200 Department of Labor, OSHA Regulations on Hazard Communications[5]

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

[1] 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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[2] Contains inhibitors.

[3] *Annual Book of ASTM Standards*, Vol 06.04.

[4] *Annual Book of ASTM Standards*, Vol 15.05.

[5] The *Code of Federal Regulations* may be obtained from the Superintendent of Documents, US Government Printing Office, Washington, DC 20402.

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

TABLE 1 Physical Properties

Property	Specification	Test Method
Specific gravity, 25/25°C	1.606 to 1.625	D 2111
Distillation range (760 mm Hg)		D 1078
Initial boiling point, °C, min	120.0	
Dry point, °C, max	125.0	
Acidity (as HCl), weight, %, max	0.0005	D 2989
Alkalinity (as NaOH), weight, %, max	0.030	D 2989
Water, weight, %, max	0.0050	D 3401
Appearance	Clear and free from suspended matter	D 3741
Color, Pt-Co, max	20	D 2108
Halide (as Cl^-), weight, %, max	0.0005	D 2988
Nonvolatile residue, weight, %, max	0.0050	D 2109
Acid acceptance, as NaOH, weight, %, min	0.10	D 2942
Copper corrosion, weight loss, mg, max		D 3316
Flask	10	
Soxhlet	20	
Condenser	20	
Acidity as HCl, max, mL, NaOH	15	

SUMMARY OF CHANGES

This section identifies the location of changes to this standard that have been incorporated since the 1998 issue. Committee D26 has highlighted those changes that affect the technical interpretation or use of this standard.

(*1*) The Specification value for Specific gravity in Table 1 was changed from 1.610 to 1.606.