Designation: D5248 – 04 (Reapproved 2010)

Standard Specification for Reclaimed 1,1,2-Trichloro 1,2,2-Trifluoroethane[1]

This standard is issued under the fixed designation D5248; 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 the three grades of 1,1,2-trichloro 1,2,2-trifluoroethane[2] typically needed in various industries. It may be used as a reference document by purchasers or by persons establishing in-house, 1,1,2-trichloro 1,2,2-trifluoroethane recovery programs.

2. Referenced Documents

2.1 *ASTM Standards:*[3]

D1064 Test Methods for Iron in Rosin Tall Oil Fatty Acids and Other Related Products[4]

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

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

D3443 Test Method for Chloride in Trichlorotrifluoroethane

D3444 Test Method for Total Acid Number of Trichlorotrifluoroethane

D3741 Test Methods for Appearance of Admixtures Containing Halogenated Organic Solvents

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

3. Classification

3.1 *Type I*—Generally recognized for use in precision applications.

TABLE 1 Physical Properties Type I

Property	Specification	Test Method
Specific Gravity, 20/20	1.54 to 1.57	D2111
Chloride, ppm, max	0.1	D3443
Acid number	0.003	D3444
Non-volatile residue, ppm, max	10	D2109
Water, ppm, max	25	D3401 or D1064
1,1,2-trichloro 1,2,2-trifluoroethane content, wt %, min	99.5	D6806
1,1,1-trichloroethane content, wt %, max	0.02	D6806
Color, Pt-Co, max	10	D2108
Appearance	clear and free from suspended matter	D3741

3.2 *Type II*—Use for less demanding precision applications.

3.3 *Type III*—General-purpose technical grade.

4. Properties

4.1 Reclaimed 1,1,2-trichloro 1,2,2-trifluoroethane Type I shall meet the requirements prescribed in Table 1.

4.2 Reclaimed 1,1,2-trichloro 1,2,2-trifluoroethane Type II shall meet the requirements prescribed in Table 2.

4.3 Reclaimed 1,1,2-trichloro 1,2,2-trifluoroethane Type III shall meet the requirements prescribed in Table 3.

5. Keywords

5.1 1,1,2-trichloro 1,2,2-trifluoroethane; CFC 113; Type I; Type II; Type III

TABLE 2 Physical Properties Type II

Property	Specification	Test Method
Specific Gravity, 20/20	1.53 to 1.57	D2111
Chloride, ppm, max	0.2	D3443
Acid number	not tested	D3444
Non-volatile residue, ppm, max	20	D2109
Water, ppm, max	50	D3401 or D1064
1,1,2-trichloro 1,2,2-trifluoroethane content, wt %, min	99.0	D6806
1,1,1-trichloroethane content, wt %, max	0.05	D6806
Color, Pt-Co, max	10	D2108
Appearance	clear and free from suspended matter	D3741

[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] 1,1,2-trichloro 1,2,2-trifluoroethane: CAS No. 76-13-1.

[3] 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.

[4] Withdrawn. The last approved version of this historical standard is referenced on www.astm.org.