Designation: D6541 – 11

StandardSpecification for HFC-236fa, 1,1,1,3,3,3–Hexafluoropropane, ($CF_3CH_2CF_3$)[1]

This standard is issued under the fixed designation D6541; 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 requirements for HFC-236fa as a fire-fighting medium.

1.2 This specification does not address the fire-fighting equipment or hardware that employs HFC-236fa or the conditions of employing such equipment (for example, hand-helds, fixed installations, and so forth).

1.3 This specification does not address the storage or transportation of HFC-236fa. Storage, handling, and transportation issues are addressed in Practice D6065.

1.4 The values stated in SI units are to be regarded as standard. The values given in parentheses are for information only.

1.5 The following safety hazards caveat pertains to the test methods 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.* A specific warning statement is given in 4.3.

2. Referenced Documents

2.1 *ASTM Standards:*[2]

D6065 Practice for Handling, Transportation, and Storage of HFC-227ea 1,1,1,2,3,3,3-Heptafluoropropane (CF_3CHFCF_3)

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

2.2 *ISO Standards:*[3]

ISO 3427 Gaseous Halogenated Hydrocarbons (Liquefied Gases)—Taking a Sample

2.3 *AHRI Standard:*[4]

2008 Appendix C Analytical Procedures for AHRI Standard 700-2006

2.4 *U.S. Government Standards:*[5]

Code of Federal Regulations (CFR) Title 49, Part 172.101 Tables of Hazardous Materials and Special Provisions

Code of Federal Regulations (CFR) Title 49, Part 172 Subpart D Marking Requirements of Packaging for Transportation

2.5 *ASHRAE Standard:*[6]

ASHRAE Standard 34 Designation and Safety Classification of Refrigerants

3. Terminology

3.1 *Definitions of Terms Specific to This Standard:*

3.1.1 *halogenated hydrocarbon (see Note 1)*—saturated hydrocarbons in which one or more of the hydrogen atoms have been replaced by atoms of the halogen series (fluorine, chlorine, bromine, and iodine). It is convention to prefix the number with an abbreviation of the compound:

CFC = chlorofluorocarbon
HCFC = hydrochlorofluorocarbon
HFC = hydrofluorocarbon
FC = fluorocarbon
R = refrigerant

NOTE 1—The halogenated compound coding terminology system provides a convenient means to reference halogenated hydrocarbons (see ASRE 34).

3.1.1.1 By definition, the right-most digit of the numbering system is the number of fluorine atoms.

3.1.1.2 The second digit from the right is the number of hydrogen atoms plus one (+1).

3.1.1.3 The third digit from the right is one less (-1) than the number of carbon atoms in the compound (when this number is zero, it is omitted from the number).

[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 D26.09 on Fire Extinguishing Agents.

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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] Available from American National Standards Institute, 25 W. 43rd St., 4th Floor, New York, NY 10036.

[4] Available from Air-Conditioning, Heating, and Refrigeration Institute, 2111 Wilson Blvd., Suite 500, Arlington, VA 22201.

[5] Available from Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20036.

[6] Available from American Society of Heating, Refrigerating, and Air-Conditioning Engineers, Inc. (ASHRAE), 1791 Tullie Circle, NE, Atlanta, GA 30329.