



Designation: D7327 – 12

Standard Specification for HFC Blend B (CH₂FCF₃, CHF₂CF₃, and CO₂)¹

This standard is issued under the fixed designation D7327; 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 reappraisal. A superscript epsilon (ε) indicates an editorial change since the last revision or reappraisal.

1. Scope

1.1 This specification covers requirements for HFC Blend B as a fire-fighting medium.

1.2 This specification does not address the fire-fighting equipment or hardware that employs HFC Blend B or the conditions of employing such equipment (for example, handhelds, fixed installations, etc.).

1.3 This specification does not address the storage or transportation of HFC Blend B. Storage, handling, and transportation issues are addressed in Practice [D7326](#).

1.4 The values stated in inch-pound units are to be regarded as standard. The values given in parentheses are mathematical conversions to SI units that are provided for information only and are not considered 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. Specific cautionary statements are given in Section 4.*

2. Referenced Documents

2.1 *ASTM Standards:*²

[D7326 Practice for Handling, Transportation, and Storage of HFC Blend B \(CH₂FCF₃, CHF₂CF₃, and CO₂\)](#)

[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 of a Sample](#)

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, 11 W. 42nd St., 13th Floor, New York, NY 10036.

2.3 *ASHRAE Standard:*⁴

[ASHRAE 34 Designation and Safety Classification of Refrigerants](#)

2.4 *U.S. Government Standards:*⁵

[CFR Title 49, Part 172, Subpart D, U.S. Department of Transportation \(DOT\), Marking Requirements of Packaging for Transportation](#)

[CFR Title 49, Part 172.101 Tables of Hazardous Materials and Special Provisions](#)

2.5 *AHRI Standards:*⁶

[2008 Appendix C for Analytical Procedures for AHRI Standard 700-2006](#)

3. Terminology

3.1 *Definitions of Terms Specific to This Standard:*

3.1.1 *HFC*—hydrofluorocarbon; a chemical compound in which the compound molecule is comprised exclusively of hydrogen, chlorine, fluorine and carbon atoms.

3.1.2 *HFC Blend B*—tertiary blend comprised of HFC-134a (1,1,1,2-tetrafluoroethane), HFC-125 (pentafluoroethane), and carbon dioxide (CO₂); a compound used to inert, extinguish, or suppress a fire or explosion hazard.

3.1.2.1 *Discussion*—The terminology system for fluorine-containing compounds (described in detail in ASHRAE Standard 34) provides a convenient means to reference the structure of individual compounds. By definition, the first digit of the numbering system represents one less than the number of carbon atoms in the compound molecule; the second digit, one more than the number of hydrogen atoms in the compound molecule; and the third digit, the number of fluorine atoms in the compound molecule. Unaccounted for valence requirements are assumed to be chlorine atoms. For example, the designation HFC-123 indicates two carbon atoms (1 + 1), two hydrogen atoms (3-1), and four fluorine atoms (4). The “a” designation at the end of the naming convention relates to the

⁴ Available from American Society of Heating, Refrigerating, and Air-Conditioning Engineers, Inc. (ASHRAE), 1791 Tullie Circle, NE, Atlanta, GA 30329.

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

⁶ Available from Air-Conditioning, Heating, and Refrigeration Institute, 2111 Wilson Blvd., Suite 500, Arlington, VA 22201.