



Designation: D6231/D6231M – 21

## Standard Specification for HFC-125 (Pentafluoroethane, C<sub>2</sub>HF<sub>5</sub>)<sup>1</sup>

This standard is issued under the fixed designation D6231/D6231M; 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-125 as a fire-fighting medium.

1.2 This specification does not address the fire-fighting equipment or hardware that employs HFC-125 or the conditions of employing such equipment, for example, hand helds, fixed installations, etc.

1.3 This specification does not address the storage or transportation of HFC-125. Storage, handling, and transportation issues are addressed in Practice [D6268](#).

1.4 The values stated in either SI units or inch-pound units are to be regarded separately as standard. The values stated in each system are not necessarily exact equivalents; therefore, to ensure conformance with the standard, each system shall be used independently of the other, and values from the two systems shall not be combined.

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, health, and environmental practices and determine the applicability of regulatory limitations prior to use.* Specific hazards statements are given in [4.3](#).

1.6 *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>2</sup>

<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 [D26.09](#) on Fire Extinguishing Agents.

Current edition approved June 1, 2021. Published June 2021. Originally approved in 1998. Last previous edition approved in 2015 as D6231-11 (2015). DOI: 10.1520/D6231\_D6231M-21.

<sup>2</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.

[D6268 Practice for Handling, Transportation, and Storage of HFC-125, Pentafluoroethane \(C<sub>2</sub>HF<sub>5</sub>\)](#)

[D6806 Practice for Analysis of Halogenated Organic Solvents and Their Admixtures by Gas Chromatography](#)

2.2 *U.S. Government Standards:*<sup>3</sup>

[49 CFR Part 172 Hazardous Materials Table, Special Provisions, Hazardous Materials Communications, Emergency Response Information, Training Requirements, and Security Plans](#)

[49 CFR Part 172.101 Purpose and Use of Hazardous Materials Table](#)

2.3 *AHRI Standard:*<sup>4</sup>

[2008 Appendix C for Analytical Procedures for AHRI Standard 700-2014](#)

2.4 *ASHRAE Standard:*<sup>5</sup>

[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, n*—the halogenated compound coding terminology system provides a convenient means to reference halogenated hydrocarbons (see ASHRAE Standard 34). Halogenated hydrocarbons are 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

<sup>3</sup> Code of Federal Regulations (CFR) documents available from U.S. Government Publishing Office (GPO), 732 N. Capitol St., NW, Washington, DC 20401, <http://www.gpo.gov>.

<sup>4</sup> Available from the Air-Conditioning, Heating, and Refrigeration Institute (AHRI), 2311 Wilson Blvd., Suite 400, Arlington, VA, 22201, <http://www.ahrinet.org>.

<sup>5</sup> Available from American Society of Heating, Refrigerating, and Air-Conditioning Engineers, Inc. (ASHRAE), 1791 Tullie Circle, NE, Atlanta, GA 30329, <http://www.ashrae.org>.