



## Designation: ~~D2472 – 00 (Reapproved 2014)~~ D2472 – 15

# Standard Specification for Sulfur Hexafluoride<sup>1</sup>

This standard is issued under the fixed designation D2472; 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 ( $\epsilon$ ) indicates an editorial change since the last revision or reapproval.

*This standard has been approved for use by agencies of the U.S. Department of Defense.*

## 1. Scope

1.1 This specification applies to sulfur hexafluoride for use as an electrical insulating gas.

NOTE 1—This specification is intended to apply only to gas as purchased. However, the test methods referred to in this standard may be useful in the evaluation of in-service or used gas. Test Method [D2284](#) may be particularly helpful since many sulfur hexafluoride decomposition products are acidic. Test Method [D2284](#) should not be used to evaluate the total amount of sulfur hexafluoride decomposition nor to identify contaminant species. This can only be done by gas chromatography and similar instrumental techniques.

1.2 The values stated in SI units are to be regarded as standard. No other units of measurement are included in this standard.

1.3 *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.*

## 2. Referenced Documents

2.1 *ASTM Standards:*<sup>2</sup>

[D2029](#) Test Methods for Water Vapor Content of Electrical Insulating Gases by Measurement of Dew Point

[D2284](#) Test Method for Acidity of Sulfur Hexafluoride

[D2685](#) Test Method for Air and Carbon Tetrafluoride in Sulfur Hexafluoride by Gas Chromatography

## 3. Detail Requirements

3.1 Sulfur hexafluoride for use as an electrical insulation material shall conform to the requirements prescribed in [Table 1](#).

## 4. Sampling

4.1 Withdraw a sample of sulfur hexafluoride from either the vapor space or liquid phase of the container.

4.2 For samples collected from the liquid phase the user must ascertain whether or not the cylinder valve is attached to a dip tube. Sample cylinders equipped with a dip tube in an upright position. Invert cylinders not equipped with a dip tube for sampling to ensure that the sample is obtained from the liquid phase of the cylinder.

4.3 Analyses may be performed on vapor space samples for routine or preliminary testing. If the vapor phase analysis indicates that impurities are not within specification, a liquid phase sample should be obtained and analysed. The liquid phase comprises most of the material in the container and is more representative of the overall composition of the SF<sub>6</sub> in the container. When a discrepancy exists between vapor and liquid phase analyses, the liquid phase analysis shall govern, unless otherwise agreed to by purchaser-seller agreement.

## 5. Precautions

5.1 Refer to the section titled Interferences in Test Method [D2029](#).

<sup>1</sup> This specification is under the jurisdiction of ASTM Committee [D27](#) on Electrical Insulating Liquids and Gases and is the direct responsibility of Subcommittee [D27.02](#) on Gases and Non-Mineral Oil Liquids.

Current edition approved Nov. 1, 2014/Oct. 1, 2015, Published December 2014/November 2015. Originally approved in 1966. Last previous edition approved in 2006/2014 as D2472 – 00(2006); (2014). DOI: [10.1520/D2472-00R14](#); [10.1520/D2472-15](#).

<sup>2</sup> 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.