Designation: D2756 – 07 (Reapproved 2012)

# Standard Test Method for Weight Loss of Electrical Insulating Varnishes[1]

This standard is issued under the fixed designation D2756; 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 test method covers the measurement of the loss in weight of cured electrical insulating varnishes on exposure to elevated temperature in air.

1.2 The values stated in SI units are the 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.* For specific precaution statements, see Section 7.

NOTE 1—IEC 60216 Part 2 is technically equivalent to this standard.

## 2. Referenced Documents

2.1 *ASTM Standards:*[2]

D115 Test Methods for Testing Solvent Containing Varnishes Used for Electrical Insulation

D1711 Terminology Relating to Electrical Insulation

D1932 Test Method for Thermal Endurance of Flexible Electrical Insulating Varnishes

D2518 Specification for Woven Glass Fabrics for Electrical Insulation (Withdrawn 2013)[3]

D5423 Specification for Forced-Convection Laboratory Ovens for Evaluation of Electrical Insulation

2.2 *IEC Standards:*

IEC 60216 Guide for the determination of thermal endurance properties of electrical insulating materials—Part 2: Choice of test criteria[4]

## 3. Terminology

3.1 *Definitions:* For definitions of terms used in this test method, refer to Terminology D1711.

## 4. Summary of Test Method

4.1 Specimens are prepared by coating glass cloth with varnish to be tested. The specimens are aged at elevated temperatures and the loss in weight is determined after a specific time.

## 5. Significance and Use

5.1 Weight loss is useful for indicating:

5.1.1 A form of degradation at elevated temperatures in air, and

5.1.2 Evolution of volatiles that have the potential to affect other components.

## 6. Apparatus

6.1 *Air-Circulating Oven,* capable of meeting the requirements of Specification D5423, Type II.

6.2 *Glass Cloth,* heat-cleaned, Style No. 116, as described in Specification D2518.

6.3 *Balance,* capable of weighing to nearest 0.001 g.

6.4 *Desiccator Jar,* with a suitable desiccant.

## 7. Safety Precautions

7.1 Do not use varnish at temperatures above the flash point when inadequate ventilation and the possibility of flames or sparks exist. Store all varnishes, reagents and solvents in sealed containers. Apply these precautions to the handling of the called for reagents and solvents.

## 8. Sampling

8.1 Sample the varnish in accordance with Test Methods D115.

## 9. Test Specimens

9.1 Prepare the test specimens as described in Test Method D1932. Make one panel for each test temperature. Use an average of ten readings to determine the thickness of the panels.

[1] This test method is under the jurisdiction of ASTM Committee D09 on Electrical and Electronic Insulating Materials and is the direct responsibility of Subcommittee D09.01 on Electrical Insulating Varnishes, Powders and Encapsulating Compounds.

Current edition approved April 1, 2012. Published April 2012. Originally approved in 1968. Last previous edition approved in 2007 as D2756 – 07. DOI: 10.1520/D2756-07R12.

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

[4] Available from International Electrotechnical Commission (IEC), 3 rue de Varembé, Case postale 131, CH-1211, Geneva 20, Switzerland, http://www.iec.ch.

***A Summary of Changes section appears at the end of this standard**