



## Standard Test Method for Determination of the Odor of Adhesives<sup>1</sup>

This standard is issued under the fixed designation D 4339; 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 ( $\epsilon$ ) indicates an editorial change since the last revision or reappraisal.

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

### 1. Scope

1.1 This test method describes a procedure for evaluating the odor of adhesives. It is intended to replace Federal Standard 175A, Method 4051.

1.2 This test method provides a means of comparing the odor of an adhesive sample to a reference sample. It is not intended to give an absolute value for the odor of a sample. It can be used for wet or dry samples.

1.3 The values stated in inch-pound units are to be regarded as the standard. The values given in parentheses are for information only.

**NOTE 1—Warning:** Do not use this test method with adhesives containing hazardous components such as solvent residues and unreacted monomeric materials.

1.4 *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. See Note 1 for specific precautionary statements.*

### 2. Referenced Documents

- 2.1 *ASTM Standards:*  
D 907 Terminology of Adhesives<sup>2</sup>  
D 1391 Method for Measurement of Odor in Atmospheres (Dilution Method)<sup>3</sup>

### 3. Terminology

3.1 *Definitions*—Several terms in this test method are defined in accordance with Terminology D 907.

3.2 *Definitions of Terms Specific to This Standard:*

3.2.1 *odor*—that property of a substance which affects the sense of smell.

### 4. Significance and Use

4.1 The results from this determination are useful in determining the suitability of adhesives in applications where the

odor level associated with the end use is critical.

### 5. Apparatus

5.1 *Glass Bottles*, 1-qt (1-L), wide-mouth, straight sided, with screw caps.

**NOTE 2**—It is important that the bottles and caps be kept clean and odor-free. Discard any bottle which cannot be made visibly clean or odor-free. Wash bottles and caps with a suitable cleaning powder, rinse thoroughly with tap water, then rinse with distilled water, drain, and dry in an oven. Do all cleaning in an odor-free atmosphere.

5.2 *Oven or Incubator*, for aging samples at elevated temperatures.

5.3 *Aluminum Foil*.

5.4 *Balance*, capable of measuring to nearest 0.1 g.

### 6. Test Sample and Test Specimen

6.1 Select a test sample representative of the adhesive being tested. It may be liquid or solid. Keep in a tightly closed container until used (5.1).

6.2 For the test specimen, place  $20.0 \pm 0.1$  g of the test sample into the glass bottle (5.1), cover with aluminum foil, place the cap on the bottle and tighten.

**NOTE 3**—Always use new aluminum foil, never reuse it.

### 7. Reference Sample and Reference Specimen

7.1 Select a reference sample, that from prior experience or knowledge, or by agreement between supplier and purchaser of adhesive, has acceptable odor.

7.1.1 Store the reference sample in a tightly closed container, specified in 5.1, in a reasonably odor-free atmosphere.

7.1.2 Take care against contamination of the reference sample. If it is suspected that the reference sample has been contaminated, discard it and obtain a new reference sample.

7.2 For the reference specimen, transfer  $20.0 \pm 0.1$  g of the reference sample into the glass bottle (5.1), cover with aluminum foil, place the cap on the bottle, and tighten.

### 8. Conditioning

8.1 Age the bottles containing the reference and test adhesive specimens for at least 24 h at ambient temperature and humidity prior to testing.

8.2 If the effect of elevated temperature aging on the odor of the adhesive is desired, place the capped bottles containing the

<sup>1</sup> This test method is under the jurisdiction of ASTM Committee D-14 on Adhesives and is the direct responsibility of Subcommittee D14.10 on Working Properties.

Current edition approved March 15, 1995. Published May 1995. Originally published as D 4339 – 84. Last previous edition D 4339 – 89.

<sup>2</sup> *Annual Book of ASTM Standards*, Vol 15.06.

<sup>3</sup> Discontinued; see *1985 Annual Book of ASTM Standards*, Vol 15.07.