



Designation: D6551/D6551M – 05

# Standard Practice for Accelerated Weathering of Pressure-Sensitive Tapes by Xenon-Arc Exposure Apparatus<sup>1</sup>

This standard is issued under the fixed designation D6551/D6551M; 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.

## 1. Scope

1.1 This practice describes one environment for the exposure of pressure-sensitive tape, used primarily for packaging, to a laboratory accelerated weathering environment.

1.2 This practice describes sample preparation and the accelerated environment to which it shall be exposed. It does not specify the length of time of the exposure nor what tests shall be performed on the material following the exposure.

1.3 The values stated in either SI units or inch-pound units are to be regarded separately as standard. The values stated in each system may not be exact equivalents; therefore, each system shall be used independently of the other. Combining values from the two systems may result in non-conformance with the standard.

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.*

## 2. Referenced Documents

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

**A666** Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar

**D3330/D3330M** Test Method for Peel Adhesion of Pressure-Sensitive Tape

**D3715/D3715M** Practice for Quality Assurance of Pressure-Sensitive Tapes

**D5105** Practice for Performing Accelerated Outdoor Weathering of Pressure-Sensitive Tapes Using Concentrated Natural Sunlight

**G151** Practice for Exposing Nonmetallic Materials in Accelerated Test Devices that Use Laboratory Light Sources

**G155** Practice for Operating Xenon Arc Light Apparatus for Exposure of Non-Metallic Materials

## 3. Summary of Practice

3.1 The pressure-sensitive tape is exposed for the time specified in accordance with the conditions provided in Practice **G155**. Following this exposure the specimen is ready for a prescribed examination of physical characteristics by other standards as determined by the applicable material specification or other document.

## 4. Significance and Use

4.1 This practice describes one method for accelerated weathering of pressure-sensitive tapes used primarily for packaging. It is not intended for evaluation the weathering characteristics of pressure-sensitive tapes used in long-term outdoor exposure conditions (see Practice **D5105**).

4.2 This practice does not necessarily provide direct simulation of natural exposure.

4.3 Results from use of this practice shall not be represented as being equivalent to those of any natural weathering test until a satisfactory degree of correlation has been established for the material in question.

4.4 Variation in results are possible when operating conditions vary within accepted limits for the instrument specified in Practices **G151** and **G155**.

## 5. Apparatus

5.1 *Exposure Apparatus*, a xenon-arc weathering apparatus with daylight filters conforming to all parameters as described in Practices **G151** and **G155**.

5.2 *Panels*<sup>3,4</sup>, for holding or supporting specimens approximately 75 by 225 mm [3 by 9 in.] and rigid enough to resist deformation during use.

5.2.1 The material shall be Type 302 or 304 stainless steel in accordance with Specification **A666** having a bright annealed

<sup>1</sup> This practice is under the jurisdiction of ASTM Committee **D10** on Packaging and is the direct responsibility of Subcommittee **D10.14** on Tapes and Labels.

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<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.

<sup>3</sup> The sole source of supply of the apparatus known to the committee at this time is Chemsultants International, 9349 Hamilton Dr., Mentor, OH 44061-1118. If you are aware of alternative suppliers, please provide this information to ASTM International Headquarters. Your comments will receive careful consideration at a meeting of the responsible technical committee,<sup>1</sup> which you may attend.