



Designation: D 6551 – 00

Standard Practice for Accelerated Weathering of Pressure-Sensitive Tapes by Xenon-Arc Exposure Apparatus¹

This standard is issued under the fixed designation D 6551; 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 practice describes one environment for the exposure of pressure-sensitive tape, used primarily for packaging, to an 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 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 must be used independently without combining values in any way.

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:

- A 666 Specification for Annealed or Cold-Worked Austenitic Steel, Sheet, Strip, Plate, and Flat Bar²
- D 3330/D 3330M Test Methods for Peel Adhesion of Pressure-Sensitive Tape at 180° Angle³
- D 3715/D 3715M Practice for Quality Assurance of Pressure-Sensitive Tapes³
- D 5105 Practice for Performing Accelerated Outdoor Weathering of Pressure-Sensitive Tapes Using Concentrated Natural Sunlight³
- G 151 Practice for Exposing Nonmetallic Materials in Accelerated Test Devices that Use Laboratory Light Sources⁴
- G 155 Practice for Operating Xenon-Arc Light Apparatus for Exposure of Nonmetallic Materials⁴

¹ 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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² *Annual Book of ASTM Standards*, Vol 01.03.

³ *Annual Book of ASTM Standards*, Vol 15.09.

⁴ *Annual Book of ASTM Standards*, Vol 14.04.

3. Summary of Practice

3.1 The pressure-sensitive tape is exposed for the time specified in accordance with the conditions provided in Practice G 155. 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 D 5105).

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 G 151 and G 155.

5. Apparatus

5.1 *Exposure Apparatus*, a xenon-arc weathering apparatus with daylight filters conforming to all parameters as described in Practices G 151 and G 155.

5.2 *Panels*^{5,6}, 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 A 666 having a bright annealed finish. The surface roughness height shall be 50 ± 5 mm [2.0 ± 0.1 μ -in.] arithmetical average deviation from the mean line.

5.2.2 Other dimensions or materials and finishes are acceptable when defined by the subsequent test standard or commodity specification.

⁵ Chemsultants International, 9349 Hamilton Drive, Mentor, OH 44061-1118.

⁶ Panel Lab Products, 26200 First Street, Cleveland, OH 94145.