



Designation: D3359 – 23

Standard Test Methods for Rating Adhesion by Tape Test¹

This standard is issued under the fixed designation D3359; 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 These test methods cover procedures for assessing the adhesion of relatively ductile coating films to metallic substrates by applying and removing pressure-sensitive tape over cuts made in the film.

1.2 Test Method A is primarily intended to rate the adhesion of coatings and coating systems greater than 125 μm (5 mils) in total thickness, while Test Method B is primarily intended to rate the adhesion of coatings and coating systems less than 125 μm (5 mils) in total thickness. Test Method B is not considered suitable for films thicker than 125 μm (5 mils) unless wider spaced cuts are employed and there is an explicit agreement between the purchaser and seller. If the thickness of the coating or coating system has not been predetermined, employ the use of a standard such as Practice D7091 or other appropriate standard agreed upon by interested parties prior to proceeding.

1.3 These test methods are used to evaluate whether the adhesion of a coating to a substrate is adequate for the user's application. They do not distinguish between higher levels of adhesion for which more sophisticated methods of measurement are required.

1.4 This test method is similar in content (but not technically equivalent) to ISO 2409.

1.5 In multicoat systems adhesion failure may occur between coats so that the adhesion of the coating system to the substrate is not determined.

1.6 The values stated in SI units are to be regarded as the standard. The values given in parentheses are for information only.

1.7 *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, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

¹ These test methods are under the jurisdiction of ASTM Committee D01 on Paint and Related Coatings, Materials, and Applications and are the direct responsibility of Subcommittee D01.23 on Physical Properties of Applied Paint Films.

Current edition approved Feb. 1, 2023. Published March 2023. Originally approved in 1974. Last previous edition approved in 2022 as D3359 – 22. DOI: 10.1520/D3359-23.

1.8 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Referenced Documents

2.1 ASTM Standards:²

D609 Practice for Preparation of Cold-Rolled Steel Panels for Testing Paint, Varnish, Conversion Coatings, and Related Coating Products

D7091 Practice for Nondestructive Measurement of Dry Film Thickness of Nonmagnetic Coatings Applied to Ferrous Metals and Nonmagnetic, Nonconductive Coatings Applied to Non-Ferrous Metals

D823 Practices for Producing Films of Uniform Thickness of Paint, Coatings and Related Products on Test Panels

D1730 Practices for Preparation of Aluminum and Aluminum-Alloy Surfaces for Painting

D2092 Guide for Preparation of Zinc-Coated (Galvanized) Steel Surfaces for Painting (Withdrawn 2008)³

D2370 Test Method for Tensile Properties of Organic Coatings

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

D3924 Specification for Standard Environment for Conditioning and Testing Paint, Varnish, Lacquer, and Related Materials

D4060 Test Method for Abrasion Resistance of Organic Coatings by the Taber Abraser

2.2 Other Standards:

ISO 2409 Paint and Varnishes — Cross-cut test⁴

PSTC 101 International Standard for Peel Adhesion of

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 American National Standards Institute (ANSI), 25 W. 43rd St., 4th Floor, New York, NY 10036, <http://www.ansi.org>.