



Designation: D1654 – 24

Standard Test Method for Evaluation of Painted or Coated Specimens Subjected to Corrosive Environments¹

This standard is issued under the fixed designation D1654; 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.

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

1. Scope

1.1 This test method covers the treatment of previously painted or coated specimens for accelerated and atmospheric exposure tests and their subsequent evaluation in respect to corrosion, blistering associated with corrosion, loss of adhesion at a scribe mark, or other film failure.

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

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

1.4 *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

- B117 Practice for Operating Salt Spray (Fog) Apparatus
- D610 Practice for Evaluating Degree of Rusting on Painted Steel Surfaces
- D714 Test Method for Evaluating Degree of Blistering of Paints
- D822 Practice for Filtered Open-Flame Carbon-Arc Exposures of Paint and Related Coatings

- D870 Practice for Testing Water Resistance of Coatings Using Water Immersion
 - D1014 Practice for Conducting Exterior Exposure Tests of Paints and Coatings on Metal Substrates
 - D1735 Practice for Testing Water Resistance of Coatings Using Water Fog Apparatus
 - D2247 Practice for Testing Water Resistance of Coatings in 100 % Relative Humidity
 - D2803 Guide for Testing Filiform Corrosion Resistance of Organic Coatings on Metal
 - D4141 Practice for Conducting Black Box and Solar Concentrating Exposures of Coatings
 - D4585 Practice for Testing Water Resistance of Coatings Using Controlled Condensation
 - D4587 Practice for Fluorescent UV-Condensation Exposures of Paint and Related Coatings
 - D5894 Practice for Cyclic Salt Fog/UV Exposure of Painted Metal, (Alternating Exposures in a Fog/Dry Cabinet and a UV/Condensation Cabinet)
 - D6695 Practice for Xenon-Arc Exposures of Paint and Related Coatings
 - D7087 Test Method for An Imaging Technique to Measure Rust Creepage at Scribe on Coated Test Panels Subjected to Corrosive Environments (Withdrawn 2019)³
 - E3 Guide for Preparation of Metallographic Specimens
 - E691 Practice for Conducting an Interlaboratory Study to Determine the Precision of a Test Method
 - G85 Practice for Modified Salt Spray (Fog) Testing
 - G87 Practice for Conducting Moist SO₂ Tests
- ### 2.2 ANSI Standard:⁴
- B94.50 Single-Point Cutting Tools, Basic Nomenclature and Definitions for

3. Terminology

3.1 *paint removal material, n*—a device or substance that is used to remove loose coating around a scribe.

¹ This test method is under the jurisdiction of ASTM Committee D01 on Paint and Related Coatings, Materials, and Applications and is the direct responsibility of Subcommittee D01.25 on Evaluation of Weathering Effects.

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² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at www.astm.org/contact. 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>.