



Designation: D3260 – 01 (Reapproved 2023)

Standard Test Method for Acid and Mortar Resistance of Factory-Applied Clear Coatings on Extruded Aluminum Products¹

This standard is issued under the fixed designation D3260; 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 test method covers the evaluation of the mortar and acid resistance of clear protective coating factory applied to extruded aluminum substrates.

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

C207 Specification for Hydrated Lime for Masonry Purposes

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

3. Summary of Test Method

3.1 Panels that have been buffed, cleaned, neutralized, and coated with the material being evaluated are exposed to freshly prepared mortar and to a hydrochloric acid solution.

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 **D01.55** on Factory Applied Coatings on Preformed Products.

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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.

4. Significance and Use

4.1 This test method will provide differentiation between types of coatings for acid and motor resistance providing the coating is applied in a uniform continuous film with a specified film thickness.

5. Reagents

5.1 *Acid*—Ten volume percent solution of commercial grade hydrochloric acid (31.4 % to 31.8 % HCl, 20°Bé) in distilled water.

5.2 *Cleaning Solution*—An alkaline cleaner³ in the concentration recommended by the manufacturer, usually 45 g/L to 60 g/L (6 oz/gal to 8 oz/gal) of water. The pH of the solution should be between 11.4 and 12.2.

5.3 *Lime*—Building lime complying with Specification **C207**.

5.4 *Neutralizing Solution*—Prepare from a stable free-flowing, granular material having a chromate base⁴ as recommended by the supplier, usually at a concentration of 90 g/L to 120 g/L (12 oz/gal to 16 oz/gal) of water.

5.5 *Sand*—Dry sand capable of passing through a 10-mesh wire screen.

6. Test Panels

6.1 Panels of extruded aluminum alloy No. 6063-T5 with dimensions 150 mm by 75 mm by 6.3 mm (6 in. by 3 in. by ¼ in.) shall be used for the test.

7. Procedure

7.1 Preparation of Test Panels:

7.1.1 Buff the aluminum panels and remove the buffing compound with an organic solvent.

7.1.2 Immerse the panels in cleaning solution (5.2) for 1 h at a temperature of 93 °C (200 °F).

7.1.3 Rinse the panels in tap water having a pH of 6.5 to 7.5 until the surface is free of water break. Use reagent water for

³ Diversey No. 808 has been found satisfactory for this purpose.

⁴ Diversey No. 814 has been found satisfactory for this purpose.