



Designation: D5363 – 16 (Reapproved 2024)

Standard Specification for Anaerobic Single-Component Adhesives (AN)¹

This standard is issued under the fixed designation D5363; 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 specification covers single-component anaerobic adhesives suitable for locking, sealing, and retaining threaded or cylindrical assemblies. The adhesives are cured to a solid state when confined between closely fitting active metal surfaces.

1.2 This specification is intended to be a means of classifying anaerobic adhesives. It is not intended for engineering design purposes.

1.3 This specification is intended to replace Military Specifications MIL-S-22473, MIL-S-46163, and MIL-R-46082.

1.4 The values stated in SI units are to be regarded as the standard.

1.5 The following safety hazards caveat pertains only to the test methods portion, Section 7, of this specification. *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.*

1.6 *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

A109/A109M Specification for Steel, Strip, Carbon (0.25 Maximum Percent), Cold-Rolled

¹ This specification is under the jurisdiction of ASTM Committee D14 on Adhesives and is the direct responsibility of Subcommittee D14.60 on Adhesive Material Classification System.

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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.

B36/B36M Specification for Brass Plate, Sheet, Strip, And Rolled Bar

B209 Specification for Aluminum and Aluminum-Alloy Sheet and Plate (Metric) B0209_B0209M

B633 Specification for Electrodeposited Coatings of Zinc on Iron and Steel

D56 Test Method for Flash Point by Tag Closed Cup Tester

D439 Specification for Automotive Gasoline (Withdrawn 1990)³

D445 Test Method for Kinematic Viscosity of Transparent and Opaque Liquids (and Calculation of Dynamic Viscosity)

D770 Specification for Isopropyl Alcohol

D907 Terminology of Adhesives

D1084 Test Methods for Viscosity of Adhesives

D1193 Specification for Reagent Water

D2693 Specification for Ethylene Glycol

D3951 Practice for Commercial Packaging

D4562 Test Method for Shear Strength of Adhesives Using Pin-and-Collar Specimen

D4800 Guide for Classifying and Specifying Adhesives

D5648 Test Method for Torque-Tension Relationship of Adhesives Used on Threaded Fasteners (Lubricity)

D5649 Test Method for Torque Strength of Adhesives Used on Threaded Fasteners

D5657 Test Method for Fluid Tightness Ability of Adhesives Used on Threaded Fasteners

E122 Practice for Calculating Sample Size to Estimate, With Specified Precision, the Average for a Characteristic of a Lot or Process

2.2 Military Standards:

MIL-STD-105 Sampling Procedures and Tables for Inspection by Attributes⁴

MIL-STD-129 Marking for Shipment and Storage⁴

MIL-STD-810 Environmental Test Methods and Engineering Guides⁴

MIL-STD-118 Commercial Packaging of Supplies and Equipment⁴

³ The last approved version of this historical standard is referenced on www.astm.org.

⁴ Available from DLA Document Services, Building 4/D, 700 Robbins Ave., Philadelphia, PA 19111-5094, <http://quicksearch.dla.mil>.