



Standard Practice for Testing Primers and Primer Surfacer Over Preformed Metal¹

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1. Scope

1.1 This practice covers the selection and use of procedures for testing primers and primer surfacers. The test methods included are listed in Table 1.

1.2 *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:

- B 117 Practice for Operating Salt Spray (Fog) Apparatus²
- C 540 Test Method for Image Gloss of Porcelain Enamel Surfaces³
- D 16 Terminology Relating to Paint, Varnish, Lacquer, and Related Products⁴
- D 522 Test Methods for Mandrel Bend Test of Attached Organic Coatings⁴
- D 523 Test Method for Specular Gloss⁴
- D 609 Practice for Preparation of Cold-Rolled Steel Panels for Testing Paint, Varnish, Conversion Coating, and Related Coating Products⁴
- D 610 Test Method for Evaluating Degree of Rusting on Painted Steel Surfaces⁵
- D 658 Test Method for Abrasion Resistance of Organic Coatings by Air Blast Abrasive⁶
- D 660 Test Method for Evaluating Degree of Checking of Exterior Paints⁴
- D 661 Test Method for Evaluating Degree of Cracking of Exterior Paints⁴
- D 714 Test Method for Evaluating Degree of Blistering of Paints⁴
- D 823 Practices for Producing Films of Uniform Thickness of Paint, Varnish, and Related Products on Test Panels⁴

TABLE 1 Test Methods

Property	Section	ASTM Method	Federal Test Method Specification No. 141B
Abrasion resistance:			
Air blast abrasion tester	6.2	D 658	...
Falling sand method	6.2	D 968	6191
Adhesion:			
Scrape adhesion	6.3	D 2197	6303.1
Parallel-groove adhesion	6.3	D 2197	6302.1
Tape adhesion	6.3	D 3359	...
Chemical resistance:			
Household chemical resistance	6.4.2	D 1308	...
Detergent resistance	6.4.3	D 2248	...
Hydrocarbon resistance	6.4.4	...	6011
Chip resistance	6.5	D 3170	...
Color difference:			
Visual evaluation	6.6	D 1729	4249.1
Instrumental evaluation	6.6	D 2244	6123
Cracking resistance	6.7	D 2246	...
Elongation:			
Conical mandrel	6.8	D 522	...
Cylindrical mandrel	6.8	D 1737	...
Filiform corrosion	6.9	D 2803	...
Gloss	6.10	D 523	6101
Hardness	6.11	D 1474	...
Holdout	6.12	C 540	...
Mildew resistance	6.13	...	6271.1
Outdoor exposure:			
Blistering	6.14.2	D 714	6461
Cracking	6.14.2	D 661	6471
Rusting	6.14.2	D 610	6451
Checking	6.14.2	D 660	6421
Print resistance	6.15	D 2091	...
Salt spray resistance	6.16	B 117	6061
Sanding properties	6.17	...	6321
Water resistance:			
High humidity	6.18.2	D 1735	...
Water immersion	6.18.3	D 870	...
Weldability	6.19	...	A

^AU.S. Military Specification MIL-P-46105 (MR).

D 870 Practice for Testing Water Resistance of Coatings Using Water Immersion⁴

D 968 Test Methods for Abrasion Resistance of Organic Coatings by Falling Abrasive⁴

D 1005 Test Methods for Measurement of Dry-Film Thickness of Organic Coatings Using Micrometers⁴

D 1186 Test Methods for Nondestructive Measurement of Dry Film Thickness of Nonmagnetic Coatings Applied to a Ferrous Base⁴

D 1308 Test Method for Effect of Household Chemicals on

¹ This practice 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 Annual Book of ASTM Standards, Vol 03.02.

³ Discontinued; see 1990 Annual Book of ASTM Standards, Vol 15.02.

⁴ Annual Book of ASTM Standards, Vol 06.01.

⁵ Annual Book of ASTM Standards, Vol 06.02.

⁶ Discontinued; see 1995 Annual Book of ASTM Standards, Vol 06.01.