



Standard Specification for Performance of Enameling System, Baking, Metal Joiner Work and Furniture¹

This standard is issued under the fixed designation F 1178; 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 specification covers the performance of a baking primer and enamel on metal for use on fabricated metal products, including marine furniture and joiner work.

1.2 The values stated in inch-pound units are to be regarded as standard. The metric (SI) units, given in parentheses, are for information only.

1.3 Painting facilities shall comply with all applicable Federal and State regulations regarding emissions and waste disposal.

1.4 *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:

A 1008 Specification for Steel, Sheet, Cold-Rolled, Carbon Structural, High-Strength Low-Alloy and High-Strength Low-Alloy with Improved Formability²

A 653/A 653M Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process³

B 117 Practice for Operating Salt Spray (Fog) Apparatus⁴

B 209 Specification for Aluminum and Aluminum-Alloy Sheet and Plate⁵

D 522 Test Methods for Mandrel Bend Test of Attached Organic Coatings⁶

D 1186 Test Methods for Nondestructive Measurement of Dry Film Thickness of Nonmagnetic Coatings Applied to a Ferrous Base⁶

D 1400 Test Method for Nondestructive Measurement of Dry Film Thickness of Nonconductive Coatings Applied to a Nonferrous Metal Base⁶

D 3359 Test Methods for Measuring Adhesion by Tape Test⁶

D 3363 Test Method for Film Hardness by Pencil Test⁶

2.2 *American Institute of Steel Construction Manual:* AISC Wire and Sheet Metal Gages—Equivalent Thickness in Decimals of an Inch, U.S. Standard Gauge (USSG) for Uncoated Hot and Cold Rolled Sheets and Galvanized Sheet Gage (GSG) for Hot-Dipped Zinc Coated Sheets⁷

2.3 *Code of Federal Regulations:*

40 CFR 60 Subpart EE—Standard of Performance for Surface Coating of Metal Furniture⁸

3. Terminology

3.1 *Definitions of Terms Specific to This Standard:* Description of Terms Specific to This Standard:

3.1.1 *air dry touch-up enamel*—an air drying enamel that matches the factory applied enamel in color and gloss and is compatible with it.

3.1.2 *baking finish*—an enamel that requires baking at temperatures above 150°F (65°C) for the development of desired properties.

3.1.3 *blister*—an enclosed raised spot on the paint surface caused by moisture or solvent trapped under the surface.

3.1.4 *cleaning*—the first phase of the metal pretreatment prior to painting.

3.1.5 *cure*—to condense or polymerize a material by heating, resulting in the full development of desired properties.

3.1.6 *degreasing*—See *cleaning*.

3.1.7 *dry film thickness (DFT)*—the actual thickness of the cured paint system. It is measured in mils or thousandths of an inch (0.001 in. or 25.4 μm).

3.1.8 *Enamel*—a paint characterized by the ability to form an especially smooth film.

¹ This specification is under the jurisdiction of ASTM Committee F25 on Ships and Marine Technology and is the direct responsibility of Subcommittee F25.01 on Structures.

Current edition approved June 10, 2001. Published September 2001.

² *Annual Book of ASTM Standards*, Vol 01.03.

³ *Annual Book of ASTM Standards*, Vol 01.06.

⁴ *Annual Book of ASTM Standards*, Vol 03.02.

⁵ *Annual Book of ASTM Standards*, Vol 02.02.

⁶ *Annual Book of ASTM Standards*, Vol 06.01.

⁷ Available from the American Institute of Steel Construction, 400 N. Michigan Avenue, Chicago, IL 60611.

⁸ Available from the U.S. Government Printing Office, Superintendent of Documents, Washington, DC 20402.