



Standard Specification for Metal, Expanded, Steel¹

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1. Scope

1.1 This specification covers expanded metal for shipboard use.

1.1.1 Expanded metal covered by this specification is intended for partition bulkheads (nonstructural), top side stowage baskets, floor gratings, and other uses.

1.2 The values stated in inch-pound units are to be regarded as the standard. The values given in parentheses are for information only and may be approximate.

1.3 The following precautionary caveat pertains only to the test methods portion, Section 10, of this specification. *This standard does not purport to address all of the safety problems 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 167 Specification for Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet, and Strip²

A 568 Specification for Steel, Sheet, Carbon and High-Strength, Low-Alloy, Hot-Rolled and Cold-Rolled, General Requirements for²

A 700 Practices for Packaging, Marking, and Loading Methods for Steel Products for Domestic Shipment³

2.2 SAE Standard:

SAE J 1086 Metals and Alloys in the Unified Numbering System⁴

2.3 Military Standards:⁵

MIL-C-16173 Corrosion Preventive Compound, Solvent Cutback, Cold-Application

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

MIL-STD-163 Steel Mill Products Preparation for Shipment and Storage

3. Classification

3.1 Expanded metal shall be of the following types, classes, and grades as specified (see 4.1.2).

3.2 Type:

3.2.1 *Type I*—Expanded (see Fig. 1).

3.2.2 *Type II*—Expanded and flattened (see Fig. 2).

3.3 Class:

3.3.1 *Class 1*—Uncoated.

3.3.2 *Class 2*—Hot-dip zinc-coated (galvanized).

3.3.3 *Class 3*—Corrosion-resisting steel.

3.4 Grade:

3.4.1 *Grade A*—0.0025 in. (0.06 mm) minimum coating thickness.

3.4.2 *Grade B*—0.0012 in. (0.03 mm) minimum coating thickness.

4. Ordering Information

4.1 Orders for material under this specification shall include the following information, as required, to describe the material adequately:

4.1.1 ASTM designation,

4.1.2 Type, class, and grade of steel required (see 3.1),

4.1.3 Material required (see 5.1),

4.1.4 Direction of shear, if not as specified (see 5.2.1),

4.1.5 Length, width, and thickness of uncoated mesh, and weight per square foot uncoated (see Tables 1-4),

4.1.6 Size of sheet required, if other than sizes specified in 6.1,

4.1.7 Whether or not sheets from which samples have been selected for coating thickness test may be included as part of material shipped (see 9.1.2), and

4.1.8 Optional requirements, if any (see Supplementary Requirements S1 through S3).

5. Materials and Manufacture

5.1 Expanded metal shall be made from carbon steel sheets of Unified Numbering System (UNS) alloys G 10250 to G 10350 as specified in Specification A 568, or from corrosion-resisting sheet as specified in Specification A 167 (see 4.1.3).

5.2 Expanded metal shall be manufactured from sheet steel

¹ This specification is under the jurisdiction of ASTM Committee A-1 on Steel, Stainless Steel and Related Alloys and is the direct responsibility of Subcommittee A01.19 on Steel Sheet and Strip.

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

³ *Annual Book of ASTM Standards*, Vol 01.05.

⁴ Available from Society of Automotive Engineers, 400 Commonwealth Drive, Warrendale, PA 15096.

⁵ Available from Standardization Documents, Order Desk, Building 4, Section D, 700 Robbins Ave., Philadelphia, PA 19111-5094, Attn: NPODS.