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Standard Specification for Metal, Expanded, Steel¹

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This standard has been approved for use by agencies of the Department of Defense.

Abstract

This specification covers expanded metal. Expanded metal shall be of the following types, classes, grades such as type I-expanded, type II-expanded and flattened, class I-uncoated, class 2-hot-dip zinc uncoated, class 3-corrosion resisting steel, grade A and grade B. Expanded metal shall be made from commercial steel, carbon steel sheets or from stainless steel sheets. Expanded metal shall be manufactured with the corresponding thickness, design size, opening size and strand size. Each single strand test specimen shall be visually inspected, and that surface of the strand observed to have the most nearly uniform coating shall be the tension surface when the strand is subject to bending. The coating thickness shall be measured microscopically at a suitable magnification. The minimum and maximum coating thicknesses shall be measured on each of the four exposed surfaces, but not at the corners.

This abstract is a brief summary of the referenced standard. It is informational only and not an official part of the standard; the full text of the standard itself must be referred to for its use and application. ASTM does not give any warranty express or implied or make any representation that the contents of this abstract are accurate, complete or up to date.

1. Scope

1.1 This specification covers expanded metal.

1.1.1 Expanded metal covered by this specification is intended for a variety of applications.

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 11, 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 (purchase separately)

The documents listed below are referenced within the subject standard but are not provided as part of

Note:

¹. This specification's under the jurisdiction of ASTM Committee A01 on Steel, Stainless Steel and Related Alloys and is the direct responsibility of Subcommittee A01.19 on Steel Sheet and Strip. Current edition approved Oct. 1, 2006. Published October 2006. Originally approved in 1989. Last previous edition approved in 2001 as F 1267-01.

². For referenced ASTM standards visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org, or Annual Book of ASTM Standard volume information, refer to the standard's Document Summary page on the ASTM website.

³. Available from Society of Automotive Engineers (SAE), 400 Common wealth Dr., Warrendale, PA 15096-0001, <http://www.sae.org>.

⁴. Available from Manufacturer Standardization Society of the Valve and Fittings Industry (MSS), 127 Park St., NE, Vienna, VA 22180-4602, <http://vwww.mss-hq.com>.

the standard.

2.1 ASTM Standards²

A123/A123M Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products

A167 Specification for Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet, and Strip

A176 Specification for Stainless and Heat-Resisting Chromium Steel Plate, Sheet, and Strip

A240/A240M Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications

A666 Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar

A700 Practices for Packaging, Marking, and Loading Methods for Steel Products for Shipment

A1008/A1008M Specification for Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, Solution Hardened, and Bake Hardenable

A1011/A1011M Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, and Ultra-High Strength

2.2 SAE Standard³

SAEJ1086 Metals and Alloys in the Unified Numbering System

2.3 Military Standards⁴

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

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

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 Commercial Steel (CS Type B) carbon steel sheets as specified in Specifications A1008/A1008M or A1011/A1011M or from stainless steel sheets as specified in Specifications A167, A176, or A666.

5.2 Expanded metal shall be manufactured from sheet steel in thicknesses corresponding to Tables 1-4 as specified (see 4.5.1).

5.2.1 Unless otherwise specified (see 4.1.4), the steel shall be sheared so that each sheet will be expanded into uniform diamond-shaped openings, the longer diagonals of which shall be parallel to the rolling direction of the sheet. The strands (c on Fig. 1 and Fig. 2) that form the sides of the openings

shall be straight and shall be rectangular in cross-section. Each opening shall be integral with adjoining openings by means of unshared bonds (see Fig. 1 and Fig. 2) of the original sheet.

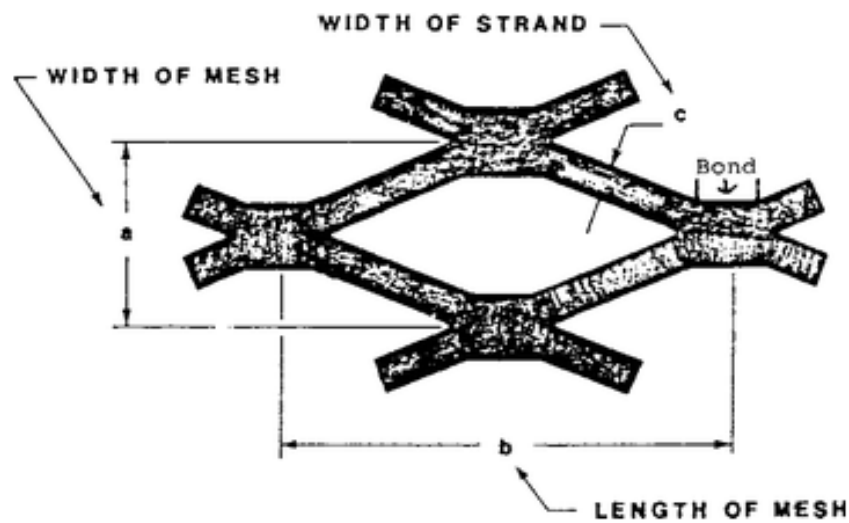
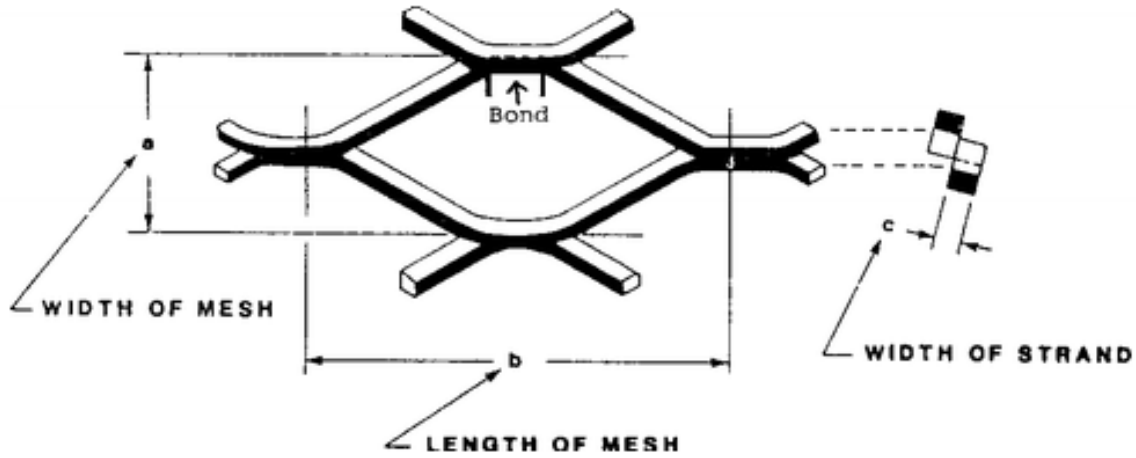


TABLE 1 Carbon Steel Dimensions, Strand Sizes, and Weight for Type I, Class 1 Metal^A

Style	Lbs per CSF ^B	Design Size ^C		Opening Size ^C		Strand Size				Approximate Values for Information Only	
		SWD	LWD	SWO	LWO	Width		Thickness		Overall Thickness	Percent Open Area
						Min.	Max	Min.	Max		
¼ 20	84	0.250	1.000	0.125	0.718	0.065	0.079	0.0329	0.0389	0.135	42 %
¼ 18	112	0.250	1.000	0.110	0.718	0.065	0.079	0.0428	0.0528	0.147	42 %
½ 20	42	0.500	1.200	0.438	0.938	0.065	0.079	0.0329	0.0389	0.140	71 %
½ 18	69	0.500	1.200	0.438	0.938	0.079	0.097	0.0428	0.0528	0.172	65 %
½ 16	85	0.500	1.200	0.375	0.938	0.178	0.096	0.0538	0.0658	0.175	65 %
½ 13	141	0.500	1.200	0.312	0.938	0.086	0.106	0.0827	0.0967	0.204	62 %
½ 13.188	306	0.500	1.200	0.250	0.800	0.188	0.230	0.0827	0.0967	0.275	16 %
¾ 16	53	0.923	2.000	0.813	1.750	0.091	0.111	0.0538	0.0658	0.210	78 %
¾ 13	76	0.923	2.000	0.750	1.688	0.086	0.106	0.0827	0.0967	0.205	79 %
¾ 10 13	114	0.923	2.000	0.750	1.625	0.130	0.158	0.0827	0.0967	0.290	69 %
¾ 9	178	0.923	2.000	0.688	1.562	0.135	0.165	0.1265	0.1425	0.312	67 %
1 16	42	1.000	2.400	0.938	2.000	0.078	0.096	0.0538	0.0658	0.192	83 %
1 14	74	1.000	2.400	0.875	1.563	0.110	0.134	0.0677	0.0817	0.225	76 %
1 12	93	1.000	2.400	0.907	1.563	0.098	0.120	0.0966	0.1126	0.225	78 %
1 10L	171	1.000	2.400	0.750	1.563	0.140	0.172	0.1265	0.1425	0.375	69 %
1 10H	198	1.000	2.400	0.750	1.563	0.162	0.198	0.1265	0.1425	0.390	64 %
1 7	403	1.000	2.400	0.576	1.563	0.248	0.303	0.1713	0.1873	0.550	45 %
1½ 18	20	1.330	3.000	1.313	2.625	0.061	0.075	0.0428	0.0528	0.140	90 %
1½ 16	40	1.330	3.000	1.250	2.625	0.097	0.119	0.0538	0.0658	0.230	84 %
1½ 13	58	1.330	3.000	1.888	2.500	0.095	0.116	0.0827	0.0967	0.242	84 %
1½ 10 13	76	1.330	3.000	1.888	2.500	0.124	0.152	0.0827	0.0967	0.284	79 %
1½ 12	70	1.330	3.000	1.112	2.375	0.098	0.120	0.0966	0.1126	0.225	84 %
1½ 10L	165	1.330	3.000	1.000	2.375	0.180	0.220	0.1265	0.1425	0.380	70 %
1½ 10H	198	1.330	3.000	0.830	2.375	0.216	0.264	0.1265	0.1425	0.460	64 %
1½ 9	119	1.330	3.000	1.125	2.375	0.130	0.158	0.1265	0.1425	0.312	78 %
1½ 6	242	1.330	3.000	1.110	2.313	0.183	0.223	0.1853	0.2033	0.433	69 %
2 10 13	65	1.850	4.000	1.625	3.438	0.148	0.180	0.0827	0.0967	0.327	82 %
2 9	88	1.850	4.000	1.563	3.375	0.134	0.164	0.1265	0.1425	0.312	84 %

^A 1 in. = 25.4 mm; 1 lb = 0.454 kg.

^B A variation in weight per square foot of ±5 % is permissible, based on the weight of any sheet or bundle.

^C A tolerance of ±10 % is permitted in dimensions, center to center.

TABLE 1 Grating—Carbon Steel Dimensions, Strand Sizes, and Weight for Type I, Class I Metal^A (continued)

Style	Lbs per ft ^{2b}	Design Size ^C		Opening Size ^C		Strand Size				Approximate Values for Information Only			
		SWD	LWD	SWO	LWO	Width		Thickness		Overall Thickness	Designs per ft		Percent Open Area
						Min.	Max.	Min.	Max.		SWD	LWD	
2 lb	2.000	1.330	5.330	1.000	3.600	0.223	0.247	0.127	0.142	0.460	9.000	2.250	65 %
3 lb	3.000	1.330	5.330	0.940	3.440	0.251	0.277	0.171	0.187	0.540	9.000	2.250	60 %
3.14 lb	3.140	2.000	6.000	1.625	4.880	0.296	0.328	0.238	0.266	0.656	6.000	2.000	69 %
4 lb	4.000	1.330	5.330	0.940	3.440	0.285	0.315	0.204	0.226	0.618	9.000	2.250	55 %
4.27 lb	4.270	1.410	4.000	1.000	2.880	0.285	0.315	0.238	0.266	0.625	8.500	3.000	57 %
5 lb	5.000	1.330	5.330	0.813	3.380	0.314	0.348	0.238	0.266	0.655	9.000	2.250	50 %
6.25 lb	6.250	1.410	5.330	0.813	3.380	0.333	0.638	0.293	0.328	0.715	8.500	2.250	50 %
7 lb	7.000	1.410	5.330	0.813	3.380	0.371	0.411	0.293	0.328	0.740	8.500	2.250	45 %
10 lb	10.000	1.410	5.330	0.533	3.200	0.532	0.588	0.293	0.328	0.855	8.500	2.250	21 %

^A 1 in. = 25.4 mm; 1 lb = 0.454 kg.

^B A variation in weight per square foot of ± 5 % is permissible, based on the weight of any sheet or bundle.

^C A tolerance of ± 10 % is permitted in dimensions, center to center.

TABLE 2 Carbon Steel Dimensions, Strand Sizes, and Weight for Type II, Class 1 Metal^A

Style	Lbs per CSF ^B	Design Size ^C		Opening Size ^C		Strand Size				Approximate Values for Information Only	
		SWD	LWD	SWO	LWO	Width		Thickness		Overall Thickness	Percent Open Area
						Min.	Max.	Min.	Max.		
¼ 20F	77	0.250	1.050	0.084	0.715	0.071	0.087	0.027	0.033	0.030	37 %
¼ 18F	104	0.250	1.050	0.075	0.715	0.072	0.888	0.036	0.044	0.040	36 %
½ 20F	37	0.500	1.250	0.375	1.000	0.071	0.087	0.026	0.032	0.029	68 %
½ 18F	62	0.500	1.250	0.325	0.960	0.087	0.107	0.035	0.043	0.039	61 %
½ 16F	78	0.500	1.250	0.325	0.920	0.086	0.106	0.045	0.055	0.050	62 %
½ 13F	122	0.500	1.250	0.302	0.920	0.096	0.118	0.063	0.077	0.070	57 %
¾ 16F	47	0.923	2.100	0.750	1.750	0.100	0.122	0.043	0.053	0.048	76 %
¾ 13F	66	0.923	2.100	0.688	1.781	0.095	0.117	0.063	0.077	0.070	77 %
¾ 10 13F	99	0.923	2.100	0.637	1.755	0.144	0.176	0.063	0.077	0.040	65 %
¾ 9F	175	0.923	2.100	0.563	1.688	0.149	0.182	0.108	0.132	0.120	64 %
1 16F	40	1.000	2.500	0.813	2.250	0.088	0.108	0.045	0.055	0.050	80 %
1 14F	71	1.000	2.500	0.813	2.000	0.113	0.138	0.068	0.077	0.060	75 %
1 12F	108	1.000	2.500	0.813	2.000	0.140	0.172	0.077	0.094	0.085	69 %
1 10L F	144	1.000	2.500	0.750	1.900	0.144	0.176	0.099	0.121	0.110	68 %
1½ 16F	35	1.330	3.200	1.062	2.750	0.107	0.131	0.043	0.053	0.048	82 %
1½ 13F	50	1.330	3.200	1.062	2.750	0.104	0.128	0.063	0.077	0.070	83 %
1½ 12F	57	1.410	3.200	1.296	2.625	0.104	0.128	0.077	0.094	0.085	84 %
1½ 10L F	127	1.330	3.200	0.900	2.563	0.169	0.207	0.099	0.121	0.110	72 %
1½ 9F	107	1.330	3.200	1.000	2.563	0.142	0.174	0.099	0.121	0.110	76 %
1½ 6F	360	1.000	2.563	1.330	3.200	0.230	0.281	0.156	0.190	0.173	49 %

^A 1 in. = 25.4 mm; 1 lb = 0.454 kg.

^B A variation in weight per square foot of ± 5 % is permissible, based on the weight of a bundle.

^C A tolerance of ± 10 % is permitted in dimensions, center to center.

TABLE 3 Stainless Steel Styles, Weights, Dimensions, and Sheet Sizes for Type I, Class 3 Metal^A

Style Designation	Weight per Square Foot, lb ^B	Size of Mesh ^C		Strand, in. ^C (See Fig. 1 (c))
		Width, in. (See Fig. 1 (a))	Length, in. (See Fig. 1 (b))	
½ No. 18	0.73	0.480	1.20	0.085
½ No. 16	0.91	0.480	1.20	0.085
¾ No. 18	0.47	0.900	2.00	0.100
¾ No. 16	0.60	0.900	2.00	0.100
¾ No. 13	0.91	0.900	2.00	0.100
¾ No. 9	2.05	0.900	2.00	0.150
1½ No. 16	0.43	1.33	3.00	0.115
1½ No. 13	0.68	1.33	3.00	0.115
1½ No. 9	1.37	1.33	3.00	0.155

^A 1 lb = 0.454 kg; 1 in. = 25.4 mm.

^B A variation in weight per square foot of ± 5 % is permissible, based on the weight of any sheet or bundle.

^C A tolerance of ± 10 % is permitted in dimensions.

TABLE 4 Stainless Steel Styles, Weights, Dimensions, and Sheet Sizes for Type II, Class 3 Metal^A

Style Designation	Weight per Square Foot, lb ^B	Size of Mesh ^C		Strand, in. ^C (See Fig. 2 (c))
		Width, in. (See Fig. 2 (a))	Length, in. (See Fig. 2 (b))	
½ No. 18	0.70	0.475	1.24	0.100
½ No. 16	0.90	0.475	1.24	0.100
¾ No. 18	0.46	0.900	2.100	0.118
¾ No. 16	0.57	0.900	2.100	0.118
¾ No. 13	0.88	0.900	2.100	0.118
¾ No. 9	1.96	0.900	2.100	0.165
1½ No. 16	0.42	1.330	3.100	0.130
1½ No. 13	0.66	1.330	3.100	0.130
1½ No. 9	1.32	1.330	3.100	0.165

^A 1 lb = 0.454 kg; 1 in. = 25.4 mm.

^B A variation in weight per square foot of ± 5 % is permissible, based on the weight of any sheet or bundle.

^C A tolerance of ± 10 % is permitted in dimensions.

6. Dimensions, Mass, and Permissible Variations

6.1 Unless otherwise specified (see 4.1.6), Type I expanded metal shall be furnished in sheets 4 ft (1.2m) wide by 8 ft (2.4 m) long, and Type II, flattened, expanded metal shall be furnished in Sheets 4 ft (1.2 m) wide by 8 ft (2.4 m) long.

6.2 Types I and II expanded metal shall be furnished in accordance with the weights and dimensions as specified in Tables 1-4, respectively.

6.3 Tolerances for Type I sheets:

6.3.1 Strand width shall not vary in excess of +10% of the nominal width.

6.3.2 Sheet width shall be not less than 1/4 in. (6 mm) below ordered width and shall not exceed 1/8 in./ft of sheet width (10 mm/m of sheet width).

6.3.3 Sheet length on 96 in. (2.4-m) length sheets shall not vary by an amount greater than plus 3/4 in. (19 mm) or minus 0 in.

6.3.4 The greatest deviation of a side edge from a straight line shall not exceed 1/4 in. (6 mm) in 96 in. (2.4 m).

6.3.5 Sheet edges shall not deviate from parallel by more than 3/8 in. (10 mm) in 96 in. (2.4 m).

6.3.6 Sheet edges shall be such that any intersecting side and edge shall not be out of square in excess

of 1/8 in./ft (10 mm/m).

6.3.7 Sheets shall be free from waves or buckles that are in excess of 3/4 in. (19 mm) from a plane surface.

6.3.8 Each sheet shall have closed diamond openings and full length bonds on all sides.

6.4 Tolerances for Type II sheets:

6.4.1 Strand width shall not vary in excess of +10 % of the nominal width.

6.4.2 Sheet thickness after flattening shall not be greater than 90 % and not less than 80% of the nominal gage thickness specified for the steel sheet.

6.4.3 Sheet width after flattening shall not be less than 1/4 in. (6 mm) below nominal width and shall not exceed 1/8 in./ft (10 mm/m) of nominal width.

6.4.4 Sheet length after flattening shall not vary from the nominal length by an amount greater than plus 1/4 in. (6 mm) or minus 0 in.

6.4.5 The greatest deviation of a side edge from a straight line after flattening shall not exceed 1/4 in. (6 mm) in 96 in. (2.4 m).

6.4.6 Sheet edges shall not deviate from parallel by more than 3/8 in. (10 mm) in 96 in. (2.4 m).

6.4.7 Ends of sheets, after shearing, shall not be more than 1/16 in./ft (5 mm/m) out of square, in relation to the side of the sheet used to gage the shearing.

6.4.8 Sheets shall be free from waves or buckles that are in excess of 3/8 in. (10 mm) from a plane surface.

7. Workmanship, Finish, and Appearance

7.1 Workmanship:

7.1.1 The strands shall be substantially uniform in width and thickness and shall be smooth and free from sharp edges. Broken strands, weld-repaired strands, laminations, irregular-shaped openings, and any other defects that may affect service-ability shall not be acceptable.

7.1.2 Expanded metal shall be free from burrs and slivers.

7.1.3 Type II flattened, expanded metal shall have the strands and bonds in the same plane as a result of passing through flattening rolls.

7.2 Expanded metal coated with zinc (hot-dipped galvanized) shall comply with Specification A 123/A 123M.

8. Sampling

8.1 Expanded metal sheets of the same material, type, class, grade and dimensions, and manufactured under essentially the same conditions, shall be considered a lot for purposes of acceptance inspection and tests.

8.2 Sampling for Coating Thickness Test—A random sample of expanded metal sheets shall be selected from each inspection lot (see 8.1) of Class 2 material, in accordance with Table 5, and subjected to the zinc-coating thickness test specified in 10.2 and 10.3.

9. Specimen Preparation

9.1 Coating Thickness Test Specimens—Three test specimens in the form of single strands having a length of one or more sides of diamond openings shall be selected from each sample sheet at or near diagonally opposite corners and at the center of the sheet.

9.1.1 The specimen strands shall be selected on the basis of visual appearance to represent the minimum coating thickness in the specified location.

9.1.2 When specified (see 4.1.7), each sample sheet from which strands have been removed may be included in the lot to be shipped, provided they meet the requirements of this specification. Such sheets shall be distinctly tagged to indicate that they shall be used for construction requiring less than a full size sheet.

9.2 Microscopic Thickness Test Specimens—The test specimens representing lots failing to meet the thickness of coating requirements using the test method of 10.2 shall be prepared for microscopic measurement of coating thickness.

9.2.1 The strand specimens shall be cut so that the cross section surfaces are exposed at approximately the midpoint of the strand length.

9.2.2 The specimens shall be prepared using acceptable metallographic methods and the coating thickness measured microscopically at a suitable magnification (see 10.3).

10. Test Methods

10.1 Testing of Sample Expanded Metal Sheets for Lot Acceptance:

10.1.1 Each of the sample expanded metal sheets selected in accordance with Table 5 shall be thickness tested in accordance with 9.1 and 10.2 to verify compliance with the zinc coating requirement of this specification.

10.1.1.1 Any sample expanded metal sheet that does not meet the requirement for zinc coating thickness as determined by the microscopic test method of 10.3 shall be cause for rejection of the lot represented by the sample.

TABLE 5 Sampling for Lot Acceptance

Number of Expanded Metal Sheets in Inspection Lot	Number of Expanded Metal Sheets for Test
40 or under	1
41 to 300	2
301 to 1300	3
1301 and over	4

10.2 Coating Thickness Test Method for Lot Acceptance:

10.2.1 Each single strand test specimen shall be visually inspected, and that surface of the strand observed to have the most nearly uniform coating shall be the tension surface when the strand is subject to bending.

10.2.2 Each specimen shall be deformed by bending so that the zinc coating is separated from the basis metal at the approximate midpoint of the strand. The Separated Zinc coating may be further stripped from the basis metal by means of a knife or similar instrument until a flake of convenient size is obtained.

10.2.3 The thickness of the zinc coating particle shall be determined in at least four locations by measurement with micrometer calipers of which the spindle and anvil are flat or conical in shape and the ends are ground to 1/16 in. (2mm) maximum radius.

10.2.3.1 If the zinc coating particle is not of sufficient size to permit four measurements, an additional particle may be removed from the strand in the same area and the thickness determined.

10.2.4 If all measurements on each sample specimen conform to the minimum thickness requirement for the particular grade represented, the lot shall be considered satisfactory.

10.2.5 If any measurement fails to conform to the minimum thickness requirement for the particular grade it represents, an equal number of sample strands, similar in appearance and selected adjacent to the original sample strands, shall be sent to a laboratory designated by the purchaser for the microscopic measurement test method of coating thickness (see 10.3).

10.3 Microscopic Test Method :

10.3.1 The coating thickness shall be measured microscopically at a suitable magnification. The minimum and maximum coating thicknesses shall be measured on each of the four exposed surfaces, but not at the corners.

10.3.2 The average coating thickness of each specimen shall be computed and compared with the requirement. If any average thickness value is less than the specified thickness, the lot represented by the specimen shall be rejected.

11. Inspection

11.1 Unless otherwise specified in the contract or purchaser order, the supplier is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified, the supplier may use his own or any other facilities suitable for the performance of the inspection requirements specified herein, unless disapproved by the purchaser.

11.1.1 The purchaser reserves the right to perform any of the inspections set forth in the specification where such inspections are deemed necessary to ensure that supplies and services conform to prescribed requirements.

11.1.2 The absence of any inspection requirements in the specification shall not relieve the supplier of the responsibility of ensuring that all products or supplies submitted to the purchaser for acceptance comply with all requirements of the contract.

12. Packaging

12.1 Expanded metal shall be preserved and packed for shipment in accordance with Practices A700.

12.2 Packaging shall be supplier's commercial practice and sufficient to afford adequate protection

against deterioration and physical damage during shipment from the supply source to the using activity and until early usage.

SUPPLEMENTARY REQUIREMENTS

The following supplementary requirements shall apply only when specified by the purchaser in the contract or purchase order (see 4.1.8).

S1. Referenced Documents

S1.1 The following documents shall apply only when one or more of the requirements of S2 Or S3 are specified in the contract or purchase order (see 4.1.8): Military Specification MIL-C-16173 and Military Standards MIL-STD-105.

S2. Preparation for Delivery

S2.1 Packaging:

S2.1.1 Class 1 expanded metal shall be coated with a preservative compound in accordance with Grade 3 Of MIL-C-16173. Class 3, corrosion-resisting steel shall not be coated with preservative compound.

S2.1.2 Expanded metal, separated for size, class, type, and grade shall be packed for shipment in secured lifts on nominal 2 By 4 in. (51 by 102 mm) skids. Skidding, strapping, and maximum permissible weight of the lifts shall be in accordance with manufacturer's standard practice unless otherwise required by the contact documents.

S2.1.3 In addition to any special marking required by the contract or order (see 4.1.8), marking for shipment shall be in accordance with manufacturer's standard practice.

S2.2 Examination of Preparation For Delivery:

S2.2.1 An examination shall be made to determine that preservation, packaging, packing, and marking requirements of the applicable contract or order are complied with. Defects shall be scored in accordance with Table S2.1.

S2.2.2 The lot size shall be the number of shipping containers fully prepared for delivery, with the exception that containers need not be sealed or closed, and noninterior containers or case liners need not be sealed (if applicable).

S2.2.3 Examination shall be made in two phases: (1) an interior examination made prior to the sealing of the container and (2) An examination of containers fully prepared for delivery. The sample unit for each phase shall be one container fully prepared for delivery.