

QQ-S-775E
February 10, 1976
SUPERSEDING
Fed. Spec. QQ-S-775D
October 9, 1967

FEDERAL SPECIFICATION

STEEL SHEETS, CARBON, ZINC-COATED (GALVANIZED)
BY THE HOT-DIP PROCESS

This specification was approved by the Commissioner,
Federal Supply Service, General Services Administration,
for the use of all Federal agencies.

1. SCOPE AND CLASSIFICATION

1.1 Scope. This specification covers steel sheet in coils or cut lengths,
zinc-coated (galvanized) on continuous lines by the hot-dip process.

1.2 Classification.

1.2.1 Types and classes. Steel sheet zinc-coated, shall be of the
following types and classes (coating designations) as specified (see 6.2):

Type I - Flat (coils or cut lengths).
Type II - Corrugated.

Class	Coating designation	Description
a	G-235	Extra heavily zinc-coated (0.0306 inch nominal thickness and thicker only).
b	G-210	Heavily zinc-coated.
c	G-165	Moderately heavily zinc-coated.
d	G-90	Ordinary zinc-coated (commercial).
e	G-60	Lightly zinc-coated for severe forming (light commercial coating).
f	G-01	Extra light coating (no minimum specified).

2. APPLICABLE DOCUMENTS

2.1 The following documents, of the issue in effect on date of invitation
for bids or request for proposal, form a part of this specification to the extent
specified here herein:

Federal Standard:

Fed. Std. No. 123 - Marking for Shipment (Civil Agencies).

(Activities outside the Federal Government may obtain copies of Federal
Specifications, Standards, and Handbooks as outlined under General Information in
the Index of Federal Specifications and Standards and at the prices indicated in

the Index. The Index, which includes cumulative monthly supplements as issued, is for sale on a subscription basis by the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

(Single copies of this specification and other Federal Specifications required by activities outside the Federal Government for bidding purposes are available without charge from Business Service Centers at the General Services Administration Regional Offices in Boston, New York, Washington, DC, Atlanta, Chicago, Kansas City, MO, Fort Worth, Denver, San Francisco, Los Angeles, and Seattle, WA.

(Federal Government activities may obtain copies of Federal Specifications, Standards, and Handbook and the Index of Federal Specifications and Standards from established distribution points in their agencies.)

Military Standards:

- MIL-STD-129 - Marking for Shipment and Storage.
- MIL-STD-163 - Steel Mill Products Preparation for Shipment and Storage.

(Copies of Military Specifications and Standards required by suppliers in connection with specific procurement functions should be obtained from the procuring activity or as directed by the contracting officer.)

2.2 Other publications. The following documents form a part of this specification to the extent specified herein. Unless otherwise indicated, the issue in effect on date of invitation for bids or request for proposal shall apply:

American Society for Testing and Materials (ASTM) Standards:

- A 361 - Steel Sheet, Zinc-Coated (Galvanized) by the Hot-Dip Process for Roofing.
- A 444 - Steel Sheet, Zinc-Coated (Galvanized) by the Hot-Dip Process for Culverts and Underdrains.
- A 525 - Steel Sheet, Zinc-Coated (Galvanized) by the Hot-Dip Process, General Requirements.
- A 526 - Steel Sheet, Zinc-Coated (Galvanized) by the Hot-Dip Process, Commercial Quality.
- A 527 - Steel Sheet, Zinc-Coated (Galvanized) by the Hot-Dip Process, Lock Forming Quality.
- A 528 - Steel Sheet, Zinc-Coated (Galvanized) by the Hot-Dip Process, Drawing Quality.
- A 642 - Steel Sheet, Zinc-Coated (Galvanized) by the Hot-Dip Process, Drawing Quality, Special Killed.
- A 700 - Packaging, Marking, and Loading Methods for Steel Products for Domestic Shipment.

(Application for copies should be addressed to the American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103.)

3. REQUIREMENTS

3.1 Description.

3.1.1 Type I, classes a, b, and c. Material supplied to type I, classes a, b, and c, shall be to ASTM A 526, with general requirements in accordance with ASTM A 525.

3.1.2 Type I, classes d, e, and f. Material supplied to type I, classes d and e, shall be in accordance with ASTM A 527, with general requirements in accordance with ASTM A 525. Material supplied to type I, class f shall be in accordance with ASTM A 528 or ASTM A 642 as applicable with general requirements in accordance with ASTM A 525.

3.1.3 Type II. Material supplied to type II for corrugated roofing sheet shall be in accordance with ASTM A 361. The coating required, as available under this specification, shall be designated (see 6.2).

3.1.4 Material supplied to type II for corrugated culvert sheet shall be in accordance with ASTM A 444.

3.2 Dimensions and tolerances. Dimensions and tolerances shall be in accordance with ASTM A 525.

3.3 Identification marking. Unless otherwise specified, each sheet and each coil shall be printed, stamped, or otherwise legibly marked at least once with the following information.

Manufacturer's name, trademark, or symbol.

ASTM designation and coating designation.

Quality symbols (CQ, LFQ) as applicable.

Copper steel (if specified (see 6.2)).

Decimal thickness.

Coating lot number.

Heat number (only when chemical composition is specified (see 6.2)).

4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection. Unless otherwise specified in the contract or purchase order, the supplier is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified in the contract or order, the supplier may use his own or any other facilities suitable for the performance of the inspection requirements specified herein, unless disapproved by the Government. The Government reserves the right to perform any of the inspections set forth in the specification where such inspections are deemed necessary to assure supplies and services conform to prescribed requirements.

4.2 Test sample.

4.2.1 Lot. Unless otherwise specified a lot shall consist of all material of the same type, class, coating designation, nominal base metal composition, thickness, and size submitted for inspection at one time.

4.3 Inspection procedures. Examinations and tests shall be as specified in

ASTM A 525, except as modified herein.

4.3.1 Sample of hot-dip bath. The amount of pure zinc in the galvanizing bath shall be determined from a sample taken from the upper half of the hot zinc bath. The sample may be taken at any time, provided the manufacturer agrees to have the sample represent coatings furnished under the contract or order. Where it is impractical to obtain a sample of the bath used under the contract or order or impractical to retain the identity of the bath sample with the coated sheets, the sample shall consist of a piece 6 by 12 inches selected from one coated sheet of the item in which case iron shall not be considered as an impurity.

4.4 Visual examination. Sheet shall be subject to in-line visual examination to determine compliance with the applicable ASTM specification.

4.5 Inspection of preparation for delivery. The preservation-packaging, packing, and marking shall be inspected to determine compliance with section 5.

5. PREPARATION FOR DELIVERY

5.1 Military agencies. Steel sheet, zinc-coated shall be preserved level A or C, packaged and packed level A or C as specified (see 6.2) in accordance with MIL-STD-163. For level C preservation, packaging, and packing requirements, ASTM A 700 is an acceptable standard.

5.2 Civil agencies. Steel sheet, zinc-coated shall be preserved level C, packaged and packed level C in accordance with MIL-STD-163 or ASTM A 700.

5.3 Marking.

5.3.1 Military agencies. In addition to any special marking required (see 6.2), interior packages and exterior shipping containers shall be marked in accordance with MIL-STD-129.

5.3.2 Civil agencies. In addition to any special marking required (see 6.2), interior packages and exterior shipping containers shall be marked in accordance with FED-STD-123.

6. NOTES.

6.1 Intended use. Classes a, b, and c are intended for use where relatively long life is required, (longevity dependent on coating thickness and severity of environment). Class a sheets are intended for limited forming applications. Class d sheets are ordinary coated sheets for general utility, commonly available in warehouse stocks. Class c is intended for use in lock forming operations where the environment is mild (such as residences) Class f, in accordance with ASTM A 528, is used in the case of severe forming operations. Class f, in accordance with ASTM A 628, is used in the case of severe forming operations and when appearance is a significant factor.

6.2 Ordering data. Procurement documents should specify the following:

- (a) Title, number, and date of this specification.

- (b) Type and class of sheet required (show ASTM designation number)
(see 1.2.1).
- (c) Coating designation and type of coating (see 3.1.3).
- (d) Copper steel, when required (see 3.3).
- (e) Whether chemical composition is specified (see 3.3).
- (f) Whether chemically treated or not chemically treated.
- (g) Whether oiled or not oiled.
- (h) Extra smooth, if required.
- (i) Phosphatized, if required.
- (j) Dimensions (show thickness, width, and length if cut length).
- (k) Coil size requirements (specify maximum outside diameter,
acceptable inside diameter, and maximum weight.)
- (m) Size of corrugations (if roofing or culvert).
- (n) Weight requirements of sheet lifts.
- (o) Applicable levels of preservation, packaging, and packing required
(see 5.1).
- (p) Special marking if required (see 5.3).

6.3 Type III of QQ-S-775D has been deleted as it is no longer being procured.

Custodians:

Army - MR
Navy - SH
Air Force - 84

Preparing activity:

Navy - SH
(Project 9515-0196)

Review activities:

Army - ME, WV

Civil Agency Coordinating Activity:

GSA - FSS

User activities:

Army - CE, EL
Navy - AS, MC, YD

Orders for this publication are to be placed with General Services Administration, acting as an agent for the Superintendent of Document. See section 2 of this specification to obtain extra copies and other documents referenced herein. Price 25 cents each.