
Standard Specification for Steel Sheet, Zinc-Coated (Galvanized), for Corrugated Steel Pipe

AASHTO Designation: M 218-03 (2020)

Technical Subcommittee: 4b, Flexible and Metallic Pipe

Release: Group 2 (June)



**American Association of State Highway and Transportation Officials
555 12th Street NW, Suite 1000
Washington, DC 20004**

Standard Specification for

Steel Sheet, Zinc-Coated (Galvanized), for Corrugated Steel Pipe

AASHTO Designation: M 218-03 (2020)



Technical Subcommittee: 4b, Flexible
and Metallic Pipe

Release: Group 2 (June)

1. SCOPE

- 1.1. This specification covers steel sheet used in the manufacture of corrugated steel pipe (CSP) for storm sewers, culverts, drains, and similar uses. The sheet is zinc-coated (galvanized) by the hot-dip process, and is produced in two coating weights, 610 g/m² and 1220 g/m². Material for this use is furnished in coils, flat in cut lengths, and corrugated in cut lengths.

2. REFERENCED DOCUMENTS

- 2.1. *AASHTO Standard:*
- T 65M/T 65, Mass [Weight] of Coating on Iron and Steel Articles with Zinc or Zinc-Alloy Coatings
- 2.2. *ASTM Standards:*
- A754/A754M, Standard Test Method for Coating Weight (Mass) of Metallic Coatings on Steel by X-Ray Fluorescence
 - A902, Standard Terminology Relating to Metallic Coated Steel Products
 - A924/A924M, Standard Specification for General Requirements for Steel Sheet, Metallic-Coated by the Hot-Dip Process
 - B6, Standard Specification for Zinc
 - E29, Standard Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications
 - E376, Standard Practice for Measuring Coating Thickness by Magnetic-Field or Eddy-Current (Electromagnetic) Testing Methods

3. TERMINOLOGY

- 3.1. *Definitions*—For definitions of terms used in this standard, refer to ASTM A902. The following definitions are as stated in that standard.
- 3.1.1. *fabricator*—(1) the organization that produces the finished pipe, or (2) for structural plate pipe, the organization that processes flat sheets and other items needed for the field assembly of the finished products.

3.1.2. *manufacturer*—the organization that produces the metal sheet from which pipe is made.

3.1.3. *purchaser*—the person or agency that purchases the finished pipe.

Note 1—With regard to this specification for sheet for corrugated steel pipe, the fabricator may also be considered as the “purchaser” of the sheet, where that term is used in this specification. Such interpretation would not restrict the purchaser of the finished pipe from enforcing any provisions of this specification.

4. ORDERING INFORMATION

4.1. All sheet, both flat and formed, covered by this specification shall be ordered only to the specified thicknesses listed in Table 4.

4.2. Unless otherwise specified in the purchase order, all material furnished to this specification shall be chemically treated.

4.3. *Orders for material to this specification shall include the following information, as necessary, to adequately describe the desired product:*

4.3.1. Name of material (galvanized steel sheet for CSP);

4.3.2. AASHTO designation and year of issue as M 218-___;

4.3.3. Coating thickness (610 g/m² or 1220 g/m²). A coating weight of 610 g/m² will be supplied as a default if no coating weight is specified;

4.3.4. *Quantity and Dimensions:*

4.3.4.1. *Cut Lengths*—show number of sheets; thickness; width; either flat or overall corrugated; length; pitch and depth of corrugations, if corrugated;

4.3.4.2. *Coiled Sheet*—show total mass; thickness; width; coil requirements (maximum outside diameter, acceptable inside diameter, and maximum mass of individual coils);

4.3.5. Certification, if required (Section 11.1); and

4.3.6. Special requirements.

Note 2—A typical ordering description is as follows: Galvanized steel sheet for CSP in accordance with M 218-___, 610 g/m², 45 000 kg, 2.77 by 700 mm by coil, 1500 mm max OD, 600 mm ID, 7000 kg max, certified.

5. CHEMICAL COMPOSITION

5.1. *Base Metal Analysis*—The base metal cast or product analyses shall conform to the chemical requirements of Table 1.

Table 1—Chemical Composition

	Cast Analysis	Product Analysis
Sulfur, max, %	0.05	0.06
Sum of carbon, manganese, phosphorus, silicon, and sulfur, max, %	0.70	0.74