Designation: A760/A760M – 25

Standard Specification for Corrugated Steel Pipe, Metallic-Coated for Sewers and Drains[1]

This standard is issued under the fixed designation A760/A760M; 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 corrugated steel pipe intended for use for storm water drainage, underdrains, the construction of culverts, and similar uses. Pipe covered by this specification is not normally used for the conveyance of sanitary or industrial wastes. The steel sheet used in fabrication of the pipe has a protective metallic coating of zinc (galvanizing), aluminum, 55 % aluminum-zinc alloy, or zinc-5 % aluminum-mischmetal alloy.

1.2 The several different metallic coatings may not provide equal protection of the base metal against corrosion or abrasion in all environments, or both. Some environments may be so severe that none of the metallic coatings included in this specification will provide adequate protection. Additional protection for corrugated steel pipe can be provided by use of coatings applied after fabrication of the pipe as described in Specification A849, or by use of polymer precoated corrugated steel pipe as described in Specification A762/A762M.

1.3 Section 9 is intended to be applied to corrugated steel pipe joints. The several different types of corrugated steel pipe joints provide various qualities. This specification is not intended for routine quality control testing or in-field acceptance testing, but is intended to establish performance limits of the pipe joints, as well as the test requirements and test methods for the joints as described herein.

1.4 This specification does not include requirements for bedding, backfill, or the relationship between earth cover load and sheet thickness of the pipe. Experience has shown that the successful performance of this product depends upon the proper selection of sheet thickness, type of bedding and backfill, controlled manufacture in the plant, and care in the installation. The installation procedure is described in Practice A798/A798M.

1.5 This specification is applicable to orders in either inch-pound units as A760 or in SI units as A760M. Inch-pound units and SI units are not necessarily equivalent. SI units are shown in brackets in the text for clarity, but they are the applicable values when the material is ordered to A760M.

1.6 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Referenced Documents

2.1 *ASTM Standards:*[2]

A90/A90M Test Method for Weight [Mass] of Coating on Iron and Steel Articles with Zinc or Zinc-Alloy Coatings

A153/A153M Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware

A307 Specification for Carbon Steel Bolts, Studs, and Threaded Rod 60 000 PSI Tensile Strength

A428/A428M Test Method for Weight [Mass] of Coating on Aluminum-Coated Iron or Steel Articles

A449 Specification for Hex Cap Screws, Bolts and Studs, Steel, Heat Treated, 120/105/90 ksi Minimum Tensile Strength, General Use

A563 Specification for Carbon and Alloy Steel Nuts (Metric) A0563_A0563M

A563M Specification for Carbon and Alloy Steel Nuts (Metric) (Withdrawn 2021)[3]

A742/A742M Specification for Steel Sheet, Metallic Coated and Polymer Precoated for Corrugated Steel Pipe

A762/A762M Specification for Corrugated Steel Pipe, Polymer Precoated for Sewers and Drains

A780 Practice for Repair of Damaged and Uncoated Areas of Hot-Dip Galvanized Coatings

A796/A796M Practice for Structural Design of Corrugated Steel Pipe, Pipe-Arches, and Arches for Storm and Sanitary Sewers and Other Buried Applications

[1] This specification is under the jurisdiction of ASTM Committee A05 on Metallic-Coated Iron and Steel Products and is the direct responsibility of Subcommittee A05.17 on Corrugated Steel Pipe Specifications.

Current edition approved Oct. 1, 2025. Published November 2025. Originally approved in 1979. Last previous edition approved in 2020 as A760/A760M – 15 (2020). DOI: 10.1520/A0760_A0760M-25.

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

[3] The last approved version of this historical standard is referenced on www.astm.org.

A798/A798M Practice for Installing Factory-Made Corrugated Steel Pipe for Sewers and Other Applications
A849 Specification for Post-Applied Coatings, Pavings, and Linings for Corrugated Steel Sewer and Drainage Pipe
A929/A929M Specification for Steel Sheet, Metallic-Coated by the Hot-Dip Process for Corrugated Steel Pipe
B633 Specification for Electrodeposited Coatings of Zinc on Iron and Steel
B695 Specification for Coatings of Zinc Mechanically Deposited on Iron and Steel
C1619 Specification for Elastomeric Seals for Joining Concrete Structures
D1056 Specification for Flexible Cellular Materials—Sponge or Expanded Rubber
F568M Specification for Carbon and Alloy Steel Externally Threaded Metric Fasteners (Metric) (Withdrawn 2012)[3]

2.2 *AASHTO Standards:*[4]
T241 Test for Helical Continuous Welded Seam Corrugated Steel Pipe
T249 Test for Helical Lock Seam Corrugated Pipe

2.3 *AISI Standard:*[5]
AISI 100 North American Specification for the Design of Cold-Formed Steel Structural Members

3. Terminology

3.1 *Definitions of Terms Specific to This Standard:*

3.1.1 *fabricator*—the producer of the pipe.

3.1.2 *manufacturer*—the producer of the sheet.

3.1.3 *minimized coating structure*—a coating characterized by a finer metallurgical coating structure obtained by a treatment designed to restrict the formation of the normal coarse-grain structure formed during solidification of the Zn-5 Al-MM alloy coating.

3.1.4 *purchaser*—the purchaser of the finished product.

3.1.5 *regular coating structure*—the normal coating structure resulting from unrestricted grain growth during normal solidification of the Zn-5 Al-MM alloy coating.

3.2 *Abbreviations:*

3.2.1 *55 Al-Zn*—55 % aluminum-zinc.

3.2.2 *MM*—mischmetal.

3.2.3 *Zn-5 Al-MM*—zinc-5 % aluminum-mischmetal.

4. Classification

4.1 The corrugated steel pipe covered by this specification is classified as follows:

4.1.1 *Type I*—This pipe shall have a full circular cross section, with a single thickness of corrugated sheet, fabricated with annular (circumferential) or helical corrugations.

4.1.2 *Type IA*—This pipe shall have a full circular cross section, with an outer shell of corrugated sheet and an inner liner of smooth (uncorrugated) sheet, fabricated with helical corrugations and lock seams.

4.1.3 *Type IR*—This pipe shall have a full circular cross section with a single thickness of smooth sheet, fabricated with helical ribs projecting outwardly.

4.1.4 *Type IS*—This pipe shall have a full circular cross section with a single thickness of smooth sheet, fabricated with helical ribs projecting outwardly, and shall also have metallic-coated steel inserts placed in the ribs so that the inside surface of the pipe is essentially smooth.

4.1.5 *Type II*—This pipe shall be a Type I pipe which has been reformed into a pipe-arch, having an approximately flat bottom.

4.1.6 *Type IIA*—This pipe shall be a Type IA pipe which has been reformed into a pipe-arch, having an approximately flat bottom.

4.1.7 *Type IIR*—This pipe shall be a Type IR pipe which has been reformed into a pipe-arch, having an approximately flat bottom.

4.1.8 *Type IIS*—This pipe shall be a Type IS pipe which has been reformed into a pipe-arch, having an approximately flat bottom.

4.1.9 *Type III*—This pipe, intended for use as underdrains or for underground disposal of water, shall be a Type I pipe which has been perforated to permit the inflow or outflow of water.

4.1.10 *Type IIIA*—This pipe, intended for use as underdrains, shall consist of a semicircular cross section, having a smooth (uncorrugated) bottom with a corrugated top shield.

4.2 Perforations in Type III pipe are included in three classes as described in 8.3.2.

4.3 Zn-5 Al-MM alloy-coated material is available in two coating classes, or structures, as follows:

4.3.1 *Class A*—Minimized coating structure.

4.3.2 *Class B*—Regular coating structure.

5. Ordering Information

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

5.1.1 Name of material (corrugated steel pipe),

5.1.2 Type of metallic coating (zinc, aluminum, 55 Al-Zn alloy, Zn-5 Al-MM alloy (see 6.1)).

5.1.2.1 For Zn-5A1-MM coating, the class coating structure (Class A minimized, etc.) (4.3).

5.1.3 ASTM designation and year of issue, as A760 -_____ for inch-pound units or as A760M -_____ for SI units.

5.1.4 Type of pipe (4.1),

5.1.5 Diameter of circular pipe (Table 1), or span and rise of pipe-arch section (Tables 2-9),

5.1.6 Length, either total length or length of each piece and number of pieces,

5.1.7 Description of corrugations (7.2),

5.1.8 Sheet thickness (8.1.2),

5.1.9 For Type I and Type II pipe, the pipe fabrication method, whether with annular corrugations or helical corrugations (see 7.1.1),

[4] Available from American Association of State Highway and Transportation Officials (AASHTO), 444 N. Capitol St., NW, Suite 249, Washington, DC 20001, http://www.transportation.org.

[5] Available from American Iron and Steel Institute (AISI), 25 Massachusetts Ave., NW, Suite 800, Washington, DC 20001, http://www.steel.org.