Designation: A459 – 24

Standard Specification for Zinc-Coated Flat Steel Armoring Tape[1]

This standard is issued under the fixed designation A459; 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 requirements for zinc-coated flat steel tape in coils for use as interlocking armor and flat armor for electrical cables. The zinc-coated tape is produced with three classes of zinc coating weight.

1.2 *Units*—The values stated in inch-pound units are to be regarded as standard. The values given in parentheses are mathematical conversions to SI units that are provided for information only and are not considered standard.

1.3 *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

A902 Terminology Relating to Metallic Coated Steel Products

B6 Specification for Zinc

3. Terminology

3.1 *Definitions*—See Terminology A902 for definitions of general terminology relating to metallic-coated steel products.

4. Significance and Use

4.1 This specification governs the manufacturing and material property testing of zinc armored tape. The details associated with the required properties of zinc-coated armor tape are listed. Materials, tensile strength, elongation, ductility, zinc coating weight, adhesion, dimensions and workmanship and finish are delineated. Sampling frequency for testing and rejection standards are included. Ordering information and coil descriptions for shipment are also provided. This standard ensures that zinc-coated armor tape is manufactured consistently across all producers.

5. Ordering Information

5.1 Orders for material under this specification shall include the following information:

5.1.1 Quantity of each size,

5.1.2 Width and thickness (see Section 14),

5.1.3 Class of coating (see Section 12), and

5.1.4 Packaging requirements (see Section 18).

6. Materials and Manufacture

6.1 The base metal shall be steel made by the basic-oxygen, or electric-furnace process and of such quality that when processed and coated with zinc, the finished tape shall have the properties and characteristics prescribed in this specification.

6.2 The uncoated tape shall have a mill finish and may have either a mill or slit edge. If the uncoated tape is manufactured by slitting or shearing, slitting burrs shall be kept to a minimum consistent with good commercial practice.

6.3 The zinc shall be applied by either the hot-dip or the electrogalvanizing process by a final operation so that all surfaces including edges are coated.

6.4 The slab zinc when used shall conform to any grade of zinc described in Specification B6.

7. Joints

7.1 The zinc-coated tape shall be furnished in coils of one continuous length, with not more than an average of one weld/50 lb (23 kg). Only welds made prior to the zinc coating operation shall be permitted and the area of such welds shall conform to the standard tolerance for thickness. The welds shall be smooth and free of sharp projections.

8. Sampling

8.1 During the visual inspection specified in Section 17, the inspector shall select at random, 1 sample coil from every 10 coils in the first 100 coils of the lot and 1 sample coil for every additional 35 coils, but not less than 3 coils from the entire lot.

[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 A05.11 on Sheet Specifications.

Current edition approved Nov. 1, 2024. Published December 2024. Originally approved in 1961. Last previous edition approved in 2020 as A459 – 08 (2020). DOI: 10.1520/A0459-24.

[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.

***A Summary of Changes section appears at the end of this standard**