



Designation: B750 – 12

Standard Specification for GALFAN¹ (Zinc-5 % Aluminum-Mischmetal) Alloy in Ingot Form for Hot-Dip Coatings²

This standard is issued under the fixed designation B750; 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 GALFAN, zinc-5 % aluminum-mischmetal (Zn-5Al-MM) alloy (UNS Z38510)³ in ingot form for remelting for use in the production of hot-dip coatings on steel. Alloy composition is specified in **Table 1**.

1.2 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 standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to become familiar with all hazards including those identified in the appropriate Material Safety Data Sheet (MSDS) for this product/material as provided by the manufacturer, to establish appropriate safety and health practices, and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 *ASTM Standards:*⁴

B899 Terminology Relating to Non-ferrous Metals and Alloys

B949 Specification for General Requirements for Zinc and Zinc Alloy Products

E29 Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications

E88 Practice for Sampling Nonferrous Metals and Alloys in Cast Form for Determination of Chemical Composition

E527 Practice for Numbering Metals and Alloys in the Unified Numbering System (UNS)

E1277 Test Method for Chemical Analysis of Zinc-5 % Aluminum-Mischmetal Alloys by ICP Emission Spectrometry

2.2 *Other Standard:*⁵

GF-1 Standard Practice for Determination of Cerium and Lanthanum Compositions in GALFAN Alloy (5 % -0.04 % La-0.04 % Ce-Bal SHG Zn)

2.3 *ISO Standards:*⁶

ISO 3815-1 Zinc and zinc alloys — Part 1: Analysis of solid samples by optical emission spectrometry

ISO 3815-2 Zinc and zinc alloys — Part 2: Analysis by inductively coupled plasma optical emission spectrometry

3. Terminology

3.1 Terms shall be defined in accordance with Terminology **B899**.

3.2 *Definitions of Terms Specific to This Standard:*

3.2.1 *mischmetal, n*—a naturally occurring mixture of rare-earth elements in metallic form, primarily cerium and lanthanum.

3.3 *Abbreviations:*

3.3.1 MM—mischmetal.

3.3.2 Zn-5Al-MM—zinc-5 % aluminum mischmetal.

4. Ordering Information

4.1 Orders for ingot under this specification shall include the relevant information as listed in Specification **B949**, Section 4.

5. Materials and Manufacture

5.1 The alloys may be made by any approved process.

5.2 The material covered by this specification shall be free from dross, slag, or other harmful contamination.

6. Chemical Composition

6.1 *Limits*—The alloys shall conform to the requirements as to chemical composition prescribed in **Table 1**. Conformance

¹ GALFAN is a registered trademark of the GALFAN Information Center, Inc.

² This specification is under the jurisdiction of ASTM Committee **B02** on Nonferrous Metals and Alloys and is the direct responsibility of Subcommittee **B02.04** on Zinc and Cadmium.

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³ UNS number in conformance with Practice **E527**.

⁴ For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

⁵ Available from International Lead Zinc Research Organization, 2525 Meridian Parkway, P.O. Box 12036, Research Triangle Park, NC 27709 – 2036, http://www.ilzro.org.

⁶ Available from American National Standards Institute (ANSI), 25 W. 43rd St., 4th Floor, New York, NY 10036, http://www.ansi.org.

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