



Designation: B852 – 16

Standard Specification for Continuous Galvanizing Grade (CGG) Zinc Alloys for Hot-Dip Galvanizing of Sheet Steel¹

This standard is issued under the fixed designation B852; 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 grades of zinc alloys, commonly known as Continuous Galvanizing Grade (CGG) alloys that contain aluminum, or aluminum and lead, that are used in continuous hot-dip galvanizing of steel sheet. The compositions for CGG grades made from primary zinc are shown in **Table 1**. Exceptions for grades made from secondary zinc are found in footnote C.

1.2 CGG alloys specified in Specification B852 are used in continuous hot-dip galvanizing of steel sheet to produce product, as specified in Specification **A653/A653M**.

1.3 Other alloy compositions not included in B852, and as may be agreed upon between the producer and the user, may be used for continuous galvanizing.

1.4 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.

1.5 *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 Safety Data Sheet (SDS) 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:²

A653/A653M Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed)

¹ 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.

Current edition approved May 1, 2016. Published July 2016. Originally approved in 1994. Last previous edition approved in 2014 as B852 – 14. DOI: 10.1520/B0852-16

² 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.

by the Hot-Dip Process

B897 Specification for Configuration of Zinc and Zinc Alloy Jumbo, Block, Half Block, and Slab Ingot

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)

E536 Test Methods for Chemical Analysis of Zinc and Zinc Alloys

E634 Practice for Sampling of Zinc and Zinc Alloys by Spark Atomic Emission Spectrometry

2.2 ISO Standards:³

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**.

4. Ordering Information

4.1 Orders for zinc alloy ingot under this specification shall include information as specified in Specification **B949**.

5. Materials and Manufacture

5.1 The producer shall use care that each shipment of CGG alloy be as uniform in quality as possible.

6. Chemical Requirements

6.1 CGG alloy shall conform to the requirements of **Table 1** as determined by chemical analysis by the producer on samples taken at his plant (see Section **9**).

³ 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