



Standard Specification for High Magnesium Aluminum-Alloy Sheet and Plate for Marine Service¹

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1. Scope*

1.1 This specification covers high magnesium (Note 1) marine application aluminum-alloy (Note 2), in those alloy-tempers shown in Table 2 [Table 3], for flat sheet, coiled sheet, and plate, in the mill finish:

NOTE 1—The term high magnesium in the general sense includes those alloys containing 3 % or more nominal magnesium.

NOTE 2—Throughout this specification use of the term alloy in the general sense includes aluminum as well as aluminum alloy.

1.2 Alloy and temper designations are in accordance with ANSI H35.1 [H35.1M]. The equivalent Unified Numbering System alloy designations are those of Table 1 preceded by A9, for example, A95083 for 5083 in accordance with Practice E 527.

1.3 The values stated in either SI units or inch-pound units are to be regarded separately as standard. The values stated in each system may not be exact equivalents; therefore each system shall be used independently of each other. Combining values from the two systems may result in non-conformance with the standard.

1.4 For acceptance criteria for inclusion of new aluminum and aluminum alloys in this specification, see Annex A2.

2. Referenced Documents

2.1 The following documents of the issue in effect on the date of material purchase, unless otherwise noted, form a part of this specification to the extent referenced herein:

2.2 ASTM Standards:²

B 557 Test Methods of Tension Testing Wrought and Cast Aluminum- and Magnesium-Alloy Products

B 557M Test Methods of Tension Testing Wrought and Cast Aluminum- and Magnesium-Alloy Products [Metric]

¹ This specification is under the jurisdiction of ASTM Committee B07 on Light Metals and Alloys and is the direct responsibility of Subcommittee B07.03 on Aluminum-Alloy Wrought Products.

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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.

B 660 Practices for Packaging/Packing of Aluminum and Magnesium Products

B 666/B 666M Practice for Identification Marking of Aluminum and Magnesium Products

B 881 Terminology Related to Aluminum- and Magnesium-Alloy Products

E 3 Practice for Preparation of Metallographic Specimens

E 29 Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications

E 34 Test Methods for Chemical Analysis of Aluminum and Aluminum-Base Alloys

E 55 Practice for Sampling Wrought Nonferrous Metals and Alloys for Determination of Chemical Composition

E 407 Test Methods for Microetching Metals and Alloys

E 527 Practice for Numbering Metals and Alloys (UNS)

E 607 Test Method for Atomic Emission Spectrometric Analysis Aluminum Alloys by the Point-to-Plane Technique, Nitrogen Atmosphere

E 716 Practices for Sampling Aluminum and Aluminum Alloys for Spectrochemical Analysis

E 1251 Test Method for Optical Emission Spectrometric Analysis of Aluminum and Aluminum Alloys by the Argon Atmosphere, Point-to-Plane, Unipolar Self-Initiating Capacitor Discharge

G 66 Test Method for Visual Assessment of Exfoliation Corrosion Susceptibility of 5xxx Series Aluminum Alloys (ASSET Test)

G 67 Test Method for Determining the Susceptibility to Intergranular Corrosion of 5xxx Series Aluminum Alloys by Mass Loss After Exposure to Nitric Acid (NAML Test)

2.3 ANSI Standards:

H35.1 Alloy and Temper Designation Systems for Aluminum³

H35.1(M) Alloy and Temper Designation Systems for Aluminum³

H35.2 Dimensional Tolerances for Aluminum Mill Products³

³ Available in the Related Materials section (gray pages) of the *Annual Book of ASTM Standards*, Vol 02.02.

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