SAE Aerospace
An SAE International Group

AEROSPACE MATERIAL SPECIFICATION

SAE AMS-STD-184A

Issued SEP 2000
Cancelled AUG 2006

Superseding AMS-STD-184

Identification Marking of Aluminum, Magnesium, and Titanium

CANCELLATION NOTICE

This specification has been declared "CANCELLED" by the Aerospace Materials Division, SAE, as of August, 2006, and has been superseded by the specifications listed below. The requirements of the latest issue of the specifications listed below shall be fulfilled whenever reference is made to the cancelled AMS-STD-184. By this action, this document will remain listed in the Numerical Section of the Index of Aerospace Material Specifications, noting that it has been superseded by the specifications listed below.

Product	Superseding Specification
Aluminum products	ASTM B 666 - Identification Marking of Aluminum and Magnesium Products
Magnesium products	ASTM B 666 - Identification Marking of Aluminum and Magnesium Products
Titanium forgings	AMS 2808 - Identification, Forgings
Titanium bar, sheet, strip, plate, and tubing	AMS 2809 - Identification, Titanium and Titanium Alloy Wrought Products

Cancelled specifications are available from SAE.

TO PLACE A DOCUMENT ORDER: **Tel: 877-606-7323 (inside USA and Canada)**
Tel: 724-776-4970 (outside USA)
Fax: 724-776-0790
Email: custsvc@sae.org
SAE WEB ADDRESS: **http://www.sae.org**

NOTICE

The original issue of AMS-STD-184 was taken directly from U.S. Military Specification Federal Standard 184B, and contains only minor editorial and format changes required to bring it into conformance with the publishing requirements of SAE technical standards. The initial release of this document is intended to replace Federal Standard 184B. Any part numbers established by the original specification remain unchanged.

The original Military Specification was adopted as an SAE standard under the provisions of the SAE Technical Standards Board (TSB) Rules and Regulations (TSB 001) pertaining to accelerated adoption of government specifications and standards. TSB rules provide for (a) the publication of portions of unrevised government specifications and standards without consensus voting at the SAE Committee evel, and (b) the use of the existing government specification or standard format.

Under Department of Defense policies and procedures, any qualification requirements and associated qualified products lists are mandatory for DOD contracts. Any requirement relating to qualified products lists (QPL's) has not been adopted by SAE and is not part of this SAE technical document.

1. GENERAL:

1.1 Purpose and scope:

This standard establishes the physical item marking requirements for identification purposes for aluminum, magnesium, and titanium procured and issued for Government agencies. Compliance with this standard will insure positive identification of these metals. Shipment and inspection acceptance markings are not within the scope of this standard.

2. APPLICABLE DOCUMENTS:

The issue of the following documents in effect on the date of the purchase order form a part of this specification to the extent specified herein. The supplier may work to a subsequent revision of a document unless a specific document issue is specified. When the referenced document has been canceled and no superseding document has been specified, the last published issue of that document shall apply.

2.1 U.S. Government Publications:

Available from DODSSP, Subscription Services Desk, Building 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5094.

MIL-STD-409 Alloy Nomenclature and Temper Designation System for Magnesium Base Alloys
MIL-STD-412 Alloy Designation System for Titanium

2.2 ANSI Publications:

Available from ANSI, 11 West 42nd Street, New York, NY 10036-8002.

ANSI H35.1 Wrought Aluminum (Alloy and Temper Designation Systems for Aluminum).

3. DEFINITIONS AND MARKING TERMS:

3.1 Definitions:

Definitions of commodity forms and shapes shall be those commercially acceptable to the aluminum, magnesium, and titanium industries.

3.1.1 Item: An item is defined as each individual piece of a product.

3.2 Marking terms:

Marking terms as used in this standard are defined as follows:

3.2.1 Producer's name or trademark: The producer's name or registered trademark used shall be that of the producer which performs the final processing or finishing operation prior to marketing the product.

3.2.2 Commercial designations: The commercial designation shall include a designator of composition and a designator of physical condition and quality.

a. The composition designator is that designator approved by the respective nationally recognized industrial association or technical society such as the American Society for Testing and Materials and the Aluminum Association.
b. The physical condition designator is that designator of temper or other physical condition approved by the respective nationally recognized industrial association or technical society.

NOTE: The composition and physical condition designators for wrought aluminum, titanium, and magnesium base alloy products shall be in accordance with ANSI H35.1, MIL-STD-412, and MIL-STD-409, respectively.

3.2.3 Specification data: The specification data shall include the number of the Government specification (including applicable slash sheet number when applicable) to which the metal was produced and the type, class, grade, and temper of the material, as applicable. Unless otherwise specified in the detail specification or contract or order, only the basic specification number (including slash sheet number when applicable) is required. The basic specification number does not include the suffix letter which indicates a revision or amendment letter.

4. MARKING REQUIREMENTS AND APPLICATION:

4.1 Marking information:

Physical item identification marking requirement and application thereof to aluminum, magnesium, and titanium shall be in accordance with table I of this standard.

TABLE I. Marking information

Subject to the limitation of column (3), markings as specified in 4.1 through 4.1.4 of this standard shall be marked on each item of aluminum, magnesium, and titanium. In addition, size shall be marked on each item as specified in column (2).

(1)	(2)	(3)
Item	Size in inches 3/ (1) Thickness (2) Diameter (3) Wall thickness	Application
Bar, rod, straightened wire, and wire extruded and drawn shapes		Printed, stamped, or otherwise permanently marked on all items 1/2 inch or more in width of flat, (with less than 1/8 inch, indented surface) and 1/2 inch or more in diameter, in constantly recurring symbols at intervals not greater than 3 feet throughout the items length. Secured lifts, bundles, and/or containers of sizes of items too small to mark shall contain two tags, bearing the required identification marking, attached to the metal at each end.
Ingot, pig and billet 1/		Impression stamped or otherwise permanently marked on each ingot, pig, or billet.
Structural and rolled shapes		Printed, stamped, or otherwise permanently marked near end of each structural shape and rolled shape.
Coiled and spooled wire	X(2)	Marked on flange of spool or on tag attached to each coil.
Plate, sheet, and flat products (except circles) 2/	X(1)	For plate, sheet, and flat products than 0.012 inch thick, (0 temper less than 0.020 inch thick): each piece shall be printed, stamped, or otherwise permanently marked near one end of the item. For plate, sheet and flat products 0.012 through 3/8 inches thick (0.020 through 3/8 inches thick for 0 temper) and less than 6 inch width: marked on the item in one row of constantly recurring symbols at intervals not greater than 3 feet.

1/ Specification data and lot number are not required to be marked on ingot, pig, and billet products.
2/ Alclad one side flat sheet, plate, circles, and coiled sheet shall be marked on the bare side.
3/ When purchased in metric units, metric identification by soft conversion is permissible.

TABLE I. Marking information (Cont'd)

(1)	(2)	(3)
Item	Size in inches 3/ (1) Thickness (2) Diameter (3) Wall thickness	Application
		For plate, sheet, and flat products 0.012 inch through 3/8 inch in thickness, (0 temper 0.020 through 3/8 inch thickness) 6 inches through 60 inches in width, and 36 inches through 200 inches in length: printed, stamped or otherwise permanently marked on the item in rows of constantly recurring symbols. Symbols in each row shall recur at intervals not greater than 3 feet. Rows shall run lengthwise of the material and shall be on 6 inch centers across the width of the item. Every third row shall contain producer's name or trademark and the thickness of the item. Printing in other rows shall contain the commercial designation and specification data and shall be staggered. For plate, sheet, and flat products over 3/8 inch thick, over 60 inches in width, or over 200 inches long: Printed, stamped or otherwise permanently marked on the item in one or two rows of constantly recurring symbols, repeated at intervals not greater than 3 feet. The row or rows shall run around the perimeter of the item on one surface. (Identification marking shall appear on one surface around the 4 edges of the item.) When two rows are used, one row shall consist of the commercial designation and specification data, and the second row shall consist of the producer's name or trademark and thickness. At the discretion of the producer, the requirements specified for plate, sheets, and flat products up through 3/8 inch thick, 6 through 60 inches in width, and 36 through 200 inches in length may be used.
Plate and sheet circles 2/	X(1) X(1)	For plate and sheet circles 24 inches and over in diameter: Marked in at least one location on each circle unless the circle was cut from continuously marked plate or sheet. For plate and sheet circles less than 24 inch diameter: Marked on shipping containers or on tags attached to the shipping containers.

2/ Alclad one side flat sheet, plate, circles, and coiled sheet shall be marked on the bare side.
3/ When purchased in metric units, metric identification by soft conversion is permissible.