

QQ-M-40b
AMENDMENT-1
April 13, 1966

FEDERAL SPECIFICATION

MAGNESIUM ALLOY FORGINGS

This amendment, which forms a part of Federal Specification QQ-M-40b, dated November 22, 1963, was approved by the Commissioner, Federal Supply Service, General Services Administration, for the use of all Federal agencies.

PAGE 1

Paragraph 2.1: Delete in its entirety and substitute:

2.1 The following specifications and standards of the issues in effect on date of invitation for bids or request for proposal, form a part of this specification to the extent specified herein.

Federal Standards:

Fed. Std. No. 123—Marking for Domestic Shipment (Civilian Agencies).

Fed. Test Method Std. No. 151—Metals; Test Methods.

(Activities outside the Federal Government may obtain copies of Federal Specifications, Standards, and Handbooks as outlined under General Information in the Index of Federal Specifications and Standards and at the prices indicated in the Index. The Index, which includes cumulative monthly supplements as issued, is for sale on a subscription basis by the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. 20402.

(Single copies of this specification and other product specifications required by activities outside the Federal Government for bidding purposes are available without charge at the General Services Administration Regional Offices in Boston, New York, Washington, D. C., Atlanta, Chicago, Kansas City, Mo., Dallas, Denver, San Francisco, Los Angeles, and Seattle, Wash.

(Federal Government activities may obtain copies of Federal Specifications, Standards, and Handbooks and the Index of Federal Specifications and Standards from established distribution points in their agencies.)

Military Specification:

MIL-M-3171—Magnesium Alloy, Process for Pretreatment and Prevention of Corrosion on.

Military Standards:

MIL-STD-105—Sampling Procedures and Tables for Inspection by Attributes.

MIL-STD-129—Marking for Shipment and Storage.

MIL-STD-649—Aluminum and Magnesium Products, Preparation for Shipment and Storage.

(Copies of Military Specifications and Standards required by contractors in connection with specific procurement functions should be obtained from the procuring activity or as directed by the contracting officer.)

Lower right-hand corner: Delete "MISC" and substitute "FORG".

PAGE 2

Paragraph 3.1.2: Delete "contractor" and substitute "supplier".

Paragraph 3.1.3: Delete "contractor" and substitute "supplier".

PAGE 3

Table II: Delete and substitute:

FORG

QQ-M-40b

TABLE II. *Mechanical properties*

Composition No.	Condition	Tensile strength, minimum	Yield strength at 0.2 percent offset or at extension indicated		Elongation in 2 inches, or in 4D minimum ¹
			Minimum	Extension under load	
		<i>P.s.i.</i>	<i>P.s.i.</i>	<i>Inch per inch</i>	<i>Percent</i>
AZ31B	F	34,000	19,000	0.0049	6.0
AZ61A	F	38,000	22,000	.0054	6.0
AZ80A	F	42,000	26,000	.0060	5.0
	T5	42,000	28,000	.0063	2.0
HM21A	T5 ²	33,000	25,000	.0059	3.0
M1A	F	30,000	18,000	.0048	3.0
TA54A	F	36,000	22,000	.0054	7.0
ZK60A	T5 ³	42,000	26,000	.0060	7.0
	T6 ⁴	43,000	32,000	.0069	4.0

¹ The letter "D" in the expression "4D" in the heading of the last column represents the diameter of the specimen.

² Properties are for forgings of 4 inches or less section thickness.

³ Properties are for forgings of 3 inches or less section thickness.

⁴ Properties are for forgings of 2 inches or less section thickness.

Paragraph 3.4: Delete in its entirety and substitute:

3.4 **Protective finish.** Unless otherwise specified in the contract or purchase order, all forgings shall be given a chrome chemical protective treatment, prior to shipment. Unless otherwise specified, for Department of Defense purchases, the chrome treatments shall be in accordance with either type I or VI of MIL-M-3171.

PAGE 4

Paragraph 4.1, line 10: Delete "specifications" and substitute "inspections".

Paragraph 4.3.2: Delete "2000 pounds of metal comprising the lot" and substitute "lot of magnesium alloy forgings".

PAGE 6

Delete parenthetical note under 5.

Paragraphs 5.1, 5.1.1, and 5.1.2: Delete and substitute:

5.1 **Packing.** Packing shall be level A, B, or C as specified (see 6.2). Unless otherwise specified, all material shall be separated by size, composition and condition when packed for shipment.

5.1.1 *Level A.* Forgings shall be packed in accordance with the level A requirements

of MIL-STD-649. Forgings shall be adequately supported within the container in a manner designated to provide a neat, compact, nonshifting load. Forgings having finished machined surfaces shall be individually protected against corrosion, or the containers shall be case lined in accordance with the requirements of MIL-STD-649 for paper and barrier materials. The forgings should be blocked to prevent piercing or tearing of the lining.

5.1.2 *Level B.* Forgings shall be packed in accordance with the level B requirements of MIL-STD-649. If acceptable to the procuring activity, small forgings may be bundled or rigidly packed in boxes. Large forgings, or forgings having protection, or so constructed or finished in handling shall be protected with paper and barrier material in accordance with the requirements of MIL-STD-649.

PAGE 7

Paragraph 6.2: Delete subparagraph (h) and substitute "(h) Level of packing required (see 5.1)."

Paragraph 6.3: Delete in its entirety and substitute:

6.3 The chrome-pickle type protective finish, type I of MIL-M-3171, applied in ac-

QQ-M-40b

cordance with this specification is an acceptable etch for flow line examination.

Delete the "Notice".

CUSTODIANS:

Army—MR

Navy—WP

Air Force—69

Review activities:

Army—MR, MU, MO

Navy—WP

Air Force—69

User activities:

Army—EL, MI, GL

Navy—YD

Air Force—None

Preparing activity:

Navy—WP

Review/user information is current as of the date of this document. For future coordination of changes to this document, draft circulation should be based on the information in the current Federal Supply Classification Listing of DOD Standardization Documents.

