SAE The Engineering Society For Advancing Mobility Land Sea Air and Space®
INTERNATIONAL
400 Commonwealth Drive, Warrendale, PA 15096-0001

AEROSPACE MATERIAL SPECIFICATION

SAE AMS 4171C

Issued NOV 1959
Revised SEP 1996

Superseding AMS 4171B

Submitted for recognition as an American National Standard

ALUMINUM ALLOY EXTRUSIONS
4.3Zn - 3.3Mg - 0.60Cu - 0.20Mn - 0.18Cr (7079-T6)

This specification has been "CANCELLED" by the Aerospace Materials Division, SAE, as of September 1996. By this action, the document revision letter and title will be deleted from the active specification index of Aerospace Material Specifications. Cancelled specifications are available from SAE upon request.

PREPARED UNDER THE JURISDICTION OF AMS COMMITTEE "D"

SAE The Engineering Resource For Advancing Mobility

400 COMMONWEALTH DRIVE, WARRENDALE, PA. 15096

AEROSPACE MATERIAL SPECIFICATION

AMS 4171B

Issued 11- 1-59
Revised 7- 1-81

ALUMINUM ALLOY EXTRUSIONS
4.3Zn - 3.3Mg - 0.60Cu - 0.20Mn - 0.18Cr (7079-T6)

This specification has been declared "NONCURRENT" by the Aerospace Materials Division, SAE, as of 3-28-79. It is recommended that this specification not be specified for new designs.

This cover sheet should be attached to the "B" revision of the subject specification.

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Society of Automotive Engineers, Inc.
485 LEXINGTON AVENUE, NEW YORK, N.Y. 10017

AEROSPACE MATERIAL SPECIFICATION

AMS 4171B
Superseding AMS 4171A
Issued 11-1-59
Revised 5-1-68

ALUMINUM ALLOY EXTRUSIONS
4.3Zn - 3.3Mg - 0.60Cu - 0.20Mn - 0.18Cr (7079-T6)

1. ACKNOWLEDGMENT: A vendor shall mention this specification number and its revision letter in all quotations and when acknowledging purchase orders.

Ø 2. FORM: Bars, rods, wire, shapes, and tubing.

3. APPLICATION: Primarily for parts requiring high strength and whose fabrication does not usually involve welding or forming. Certain design and processing procedures may cause this material to be susceptible to stress corrosion cracking; ARP 823 recommends practices to minimize such conditions.

4. COMPOSITION:

	min	max
Zinc	3.8	4.8
Magnesium	2.9	3.7
Copper	0.40	0.8
Manganese	0.10	0.30
Chromium	0.10	0.25
Iron	--	0.40
Silicon	--	0.30
Titanium	--	0.10
Other Impurities, each	--	0.05
Other Impurities, total	--	0.15
Aluminum	remainder	

5. CONDITION: Solution and precipitation heat treated.

5.1 Unless otherwise specified, extrusions shall be supplied with an as-extruded surface finish; light polishing to remove minor surface imperfections is permissible provided such imperfections can be removed within the dimensional tolerances.

6. TECHNICAL REQUIREMENTS: The product shall conform to the following requirements; tensile Ø properties shall be determined in accordance with the latest issue of AMS 2355.

6.1 Longitudinal Tensile Properties:

Nominal Diameter or Thickness, and Area (bars, rods, wire, shapes) or Nominal Wall Thickness and Area (tubing) Inches	Tensile Strength psi, min	Yield Strength at 0.2% Offset or at Extension Indicated (E = 10,300,000)		Elongation % in 2 in. or 4D, min
		psi, min	Extension Under Load in. in 2 in.	
Up to 0.250, excl				
Area up to 20 sq in., incl	75,000	67,000	0.0170	7
0.250 to 0.499, incl				
Area up to 20 sq in., incl	77,000	68,000	0.0172	7
Over 0.499 to 1.499, incl				
Area up to 20 sq in., incl	78,000	70,000	0.0176	7
Over 1.499 to 2.999, incl				
Area up to 20 sq in., incl	79,000	70,000	0.0176	7
Over 2.999 to 4.499, incl				
Area up to 20 sq in., incl	79,000	70,000	0.0176	7
Area over 20 to 32 sq in., incl	77,000	70,000	0.0176	7
Area over 32 to 50 sq in., incl	76,000	68,000	0.0172	7
Over 4.499 to 5.000, incl				
Area up to 38 sq in., incl	78,000	68,000	0.0172	6
Area over 38 to 60 sq in., incl	76,000	68,000	0.0172	6
Over 5.000 to 5.999, incl				
Area up to 38 sq in., incl	78,000	68,000	0.0172	6
Area over 38 to 60 sq in., incl	76,000	68,000	0.0172	6
Over 5.999 to 6.999, incl				
Area up to 50 sq in., incl	76,000	66,000	0.0168	6
Area over 50 to 60 sq in., incl	74,000	64,000	0.0164	4