

AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
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AMS4350 B

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MAGNESIUM ALLOY BARS (EXTRUDED) AZ61X

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

2. FORM: Bars, rods and shapes.

3. COMPOSITION:

Aluminum	5.8 - 7.2
Zinc	0.4 - 1.5
Manganese	0.15 min
Silicon	0.30 max
Copper	0.05 max
Nickel	0.005max
Iron	0.005max
Total Other Impurities	0.30 max
Magnesium	Remainder

4. CONDITION: (a) As extruded conforming to the following minimum physical properties:

	<u>Extruded Shapes</u>	<u>Extruded Bars and Rods Thickness or Diameter, inches</u>	
		1/4 to 1-1/2, incl	Over 1-1/2 to 3, incl
Tensile Strength, psi	40,000	40,000	38,000
Yield Strength (0.2% Offset), psi	22,000	26,000	23,000
Equivalent Extension Under Load, inch in 2 in.	0.0108	0.0120	0.0111
Elongation, % in 4D	10	11	10

(b) Bars, rods and shapes shall have hardness of not less than Brinell 50, using 500 kg load and 10 mm ball or the equivalent, or not less than Brinell 57, using 1000 kg load and 10 mm ball, but shall not be rejected on the basis of hardness if they conform to the minimum tensile requirements.

5. QUALITY: (a) Bars, rods and shapes shall be uniform in quality and condition, clean, sound and free from foreign material and from internal and external defects which adversely affect their strength, use, or machinability. Material revealing defects during fabrication will be subject to rejection.

(b) Bars, rods, and shapes and parts made therefrom shall be subject to inspection by any method which will reveal defects.

(c) Unless otherwise specified, all bars, rods and shapes shall be supplied with the extruded surface finish.

6. TOLERANCES: Unless otherwise specified, tolerances shall conform to the latest issue of AMS 2211 as applicable.

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