



# AEROSPACE MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.  
TWO PENNSYLVANIA PLAZA, NEW YORK, N.Y. 10001

**AMS 4180C**

Superseding AMS 4180B

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## ALUMINUM WIRE 99.0 Min Al (1100-H18)

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### 1. SCOPE:

1.1 Form: This specification covers an aluminum alloy in the form of wire.

1.2 Application: Primarily for metal spraying.

2. APPLICABLE DOCUMENTS: The following publications form a part of this specification to the extent specified herein. The latest issue of Aerospace Material Specifications shall apply.

2.1 SAE Publications: Available from Society of Automotive Engineers, Inc., Two Pennsylvania Plaza, New York, New York 10001.

#### 2.1.1 Aerospace Material Specifications:

AMS 2355 - Quality Assurance Sampling and Testing of Aluminum and Magnesium Alloys, Wrought Products Except forgings

### 3. TECHNICAL REQUIREMENTS:

3.1 Composition: Shall conform to the following percentages by weight, determined in accordance with AMS 2355.

	min	max
Aluminum	99.00	--
Copper	0.05	- 0.20
Iron plus Silicon	--	1.0
Zinc	--	0.10
Manganese	--	0.05
Other Impurities, each	--	0.05
Other Impurities, total	--	0.15

3.2 Condition: Drawn, full hard (-H18) temper.

3.3 Properties: The wire shall conform to the following requirements; tensile properties shall be determined in accordance with AMS 2355.

3.3.1 Tensile Strength: Shall be not lower than 22,000 psi (152 MN/m<sup>2</sup>).

3.3.2 Recoil: Wire shall not recoil of its own volition during use.

3.4 Quality: Material shall be uniform in quality and condition, clean, sound, and free from foreign materials and from internal and external imperfections detrimental to fabrication or performance of parts.

3.5 Sizes: Unless otherwise specified, wire shall be 0.091 in. (2.311 mm) in diameter. Other sizes commonly used for metal spraying are 0.125 in. (3.175 mm) and 0.1875 in. (4.763 mm) in diameter.

3.6 Tolerances: Unless otherwise specified, diameter tolerances for all sizes of wire shall be +0.0005 in. (0.0127 mm) and -0.0025 in. (-0.0635 mm).