

# AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.  
29 West 39th Street  
New York City

## AMS 5782A

Issued 11-1-48

Revised 6-1-51

STEEL WIRE, CORROSION AND HEAT RESISTANT  
19Cr - 9Ni - 1.5W - 1(Cb+Ta) - 0.5Mo - 0.2Ti

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

2. APPLICATION: Primarily for use as bare wire filler metal for welding.

3. COMPOSITION:

		Check Analysis	
		Under	Min or Over Max
Carbon	0.07 - 0.13	0.01	0.01
Manganese	1.00 - 2.00	0.04	0.04
Silicon	1.00 max	--	0.05
Phosphorus	0.040 max	--	0.005
Sulfur	0.030 max	--	0.005
Chromium	19.00 - 22.00	0.20	0.20
Nickel	8.00 - 9.50	0.15	0.15
Molybdenum	0.35 - 0.65	0.05	0.05
Tungsten	1.25 - 1.75	0.05	0.05
Columbium + Tantalum	1.00 - 1.40	0.05	0.05
Titanium	0.10 - 0.30	0.05	0.05
Copper	0.50 max	--	0.03

4. CONDITION: Cold drawn, unless otherwise specified.

5. TECHNICAL REQUIREMENTS:

5.1 Tensile Properties: Wire furnished in coils shall have tensile strength of 110,000 - 150,000 psi.

5.2 Weldability: Melted wire shall flow smoothly and evenly during welding and shall be capable of producing acceptable welds.

6. QUALITY: Wire shall be uniform in quality and condition, clean, sound, smooth, and free from foreign materials and from internal and external defects detrimental to its use for welding purposes.

7. TOLERANCES:

7.1 Unless otherwise specified, straight lengths shall not vary in length more than plus and minus 1/4 in. from the length ordered.

7.2 Unless otherwise specified, diameter of the wire shall not vary more than plus and minus 0.002 in. from the size ordered.

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