

AERONAUTICAL MATERIAL SPECIFICATION

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

AMS 5688B

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STEEL WIRE, CORROSION RESISTANT

18 Chromium 8 Nickel (Spring)

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

2. COMPOSITION:

Carbon	0.15 max
Manganese	0.20 - 2.50
Silicon	0.20 - 1.50
Copper	0.50 max
Phosphorus	0.04 max
Sulphur	0.04 max
Chromium	17.00 min
Nickel	7.00 min

3. CONDITION: (a) Spring temper, cold drawn to the required size, conforming to the following minimum tensile strength; coils shall be supplied, unless otherwise specified:

Diameter Inch	Tensile Strength, psi	
	Cut and Straightened Lengths	Coils
To 0.026, incl.	280,000	300,000
Over 0.026 to 0.029, incl.	275,000	295,000
Over 0.029 to 0.033, incl.	273,000	290,000
Over 0.033 to 0.041, incl.	260,000	280,000
Over 0.041 to 0.047, incl.	255,000	270,000
Over 0.047 to 0.041, incl.	255,000	265,000
Over 0.051 to 0.055, incl.	245,000	255,000
Over 0.055 to 0.063, incl.	240,000	250,000
Over 0.063 to 0.071, incl.	235,000	245,000
Over 0.071 to 0.080, incl.	230,000	240,000
Over 0.080 to 0.090, incl.	225,000	235,000
Over 0.090 to 0.100, incl.	220,000	230,000
Over 0.100 to 0.106, incl.	215,000	225,000
Over 0.106 to 0.118, incl.	210,000	220,000
Over 0.118 to 0.138, incl.	205,000	215,000
Over 0.138 to 0.146, incl.	200,000	210,000
Over 0.146 to 0.162, incl.	185,000	195,000
Over 0.162 to 0.180, incl.	170,000	180,000

(b) The wire shall be capable of being bent around its own diameter without breaking or cracking of the surface.

(c) Coiling.- The wire shall show a uniform pitch with no splits or fractures when it is wound into a tightly closed coil on an arbor of size shown in the table below and the resultant coil stretched to a permanent set of four times its as-wound length. This requirement shall apply only to wire furnished in coils and having diameter of 0.125 inch and less.