

# AERONAUTICAL MATERIAL SPECIFICATIONS

## AMS 5780

SOCIETY OF AUTOMOTIVE ENGINEERS, Inc. 485 Lexington Ave., New York 17, N.Y.

Issued 9-15-57  
Revised

### STEEL WIRE, CORROSION AND MODERATE HEAT RESISTANT 15.5Cr - 4.5Ni - 2.9Mo - 0.1N

1. ACKNOWLEDGMENT: A vendor shall mention this specification number in all quotations and when acknowledging purchase orders.
2. APPLICATION: Primarily for use as bare filler metal in inert gas arc welding of parts fabricated from material of similar composition.
3. COMPOSITION:

		<u>Check Analysis</u>	
		Under Min or Over Max	
Carbon	0.10 - 0.15	0.01	0.01
Manganese	0.50 - 1.25	0.04	0.04
Silicon	0.50 max	--	0.05
Phosphorus	0.040 max	--	0.005
Sulfur	0.030 max	--	0.005
Chromium	15.00 - 16.00	0.20	0.20
Nickel	4.00 - 5.00	0.07	0.07
Molybdenum	2.50 - 3.25	0.10	0.10
Nitrogen	0.07 - 0.13	0.01	0.01

4. CONDITION: Cold drawn, annealed, and descaled.
  - 4.1 Straight lengths, coils, or wound on spools or reels, as ordered.
5. TECHNICAL REQUIREMENTS:
  - 5.1 Unless otherwise specified, wire shall be annealed by heating to 1850 - 1975 F, holding at heat for not less than 90 min. per in. of diameter, and quenching in water or otherwise cooling as rapidly as possible to room temperature.
  - 5.2 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 imperfections detrimental to its use for welding purposes.
7. TOLERANCES:
  - 7.1 Straight Lengths: Unless otherwise specified, straight lengths shall not vary more than  $\pm 1/4$  in. from the length ordered.

Section 7C of the SAE Technical Board rules provides that: "All technical reports including standards approved and practices recommended, are advisory only. Their use by anyone engaged in industry or trade is entirely voluntary. There is no attempt to adhere to any SAE standard or recommended practice, and no commitment to conform to or be guided by any technical report. In formulating and approving technical reports, the Board and its Committees will not investigate or consider patents which may apply to the subject matter. Prospective users of the report are responsible for protecting themselves against liability for infringement of patents."