

AERONAUTICAL MATERIAL SPECIFICATION

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

AMS 5683B

Issued 10-15-40

Revised 6-1-51

ALLOY WIRE, CORROSION AND HEAT RESISTANT
Nickel Base - 15.5Cr - 8Fe
Cold Drawn

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, but not recommended for inert gas welding.

3. COMPOSITION:

Carbon	0.15	max
Manganese	1.00	max
Silicon	0.50	max
Sulfur	0.015	max
Chromium	14.00 - 17.00	
Nickel + Cobalt	72.00	min
Cobalt, if determined	1.00	max
Iron	8.00 - 10.00	
Copper	0.50	max

4. CONDITION: Cold drawn, unless otherwise specified.
5. TECHNICAL REQUIREMENTS: 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 0.001 in. and minus 0.003 in. from the size ordered.
8. REPORTS:
 - 8.1 Unless otherwise specified, the vendor of wire shall furnish with each shipment three copies of a report of the results of tests for chemical composition of each heat in the shipment. This report shall include the purchase order number, heat number, material specification number, size, and quantity from each heat.
 - 8.2 Unless otherwise specified, when parts made of this wire or assemblies requiring the use of this welding wire are supplied, the part or assembly manufacturer shall inspect each lot of wire to determine conformance to this specification and shall furnish with each shipment three copies of a report stating that the wire conforms to the requirements of this specification. This report shall include the purchase order number, material specification number, part or assembly number, and quantity.