



AEROSPACE MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.

TWO PENNSYLVANIA PLAZA, NEW YORK, N.Y. 10001

AMS 5837A

Superseding AMS 5837

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ALLOY WIRE, WELDING, CORROSION AND HEAT RESISTANT

Nickel Base - 21.5Cr - 9.0Mo - 3.7(Cb+Ta)

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 filler metal in inert gas arc welding.
3. COMPOSITION:

| | min | max |
|----------------------|---------------|-------|
| Carbon | -- | 0.10 |
| Manganese | -- | 0.50 |
| Silicon | -- | 0.50 |
| Phosphorus | -- | 0.015 |
| Sulfur | -- | 0.015 |
| Chromium | 20.00 - 23.00 | |
| Molybdenum | 8.00 - 10.00 | |
| Columbium + Tantalum | 3.15 - 4.15 | |
| Cobalt | -- | 1.00 |
| Titanium | -- | 0.40 |
| Aluminum | -- | 0.40 |
| Iron | -- | 5.00 |
| Nickel | remainder | |

- 3.1 Check Analysis: Composition variations shall meet the requirements of the latest issue of AMS 2269.
4. CONDITION: Cold drawn, stress relieved if necessary, and having a bright finish. Wire shall be furnished on disposable spools for machine welding or in cut lengths for manual welding, as ordered.
 - 4.1 In-process annealing between cold rolling or drawing operations shall be performed in a suitable protective atmosphere.
 - 4.2 Oxides, dirt, and drawing compounds shall be removed by cleaning processes which will neither result in pitting nor cause gas absorption by the wire or deposition of substances harmful to welding operations.
5. TECHNICAL REQUIREMENTS:
 - 5.1 Welding: Melted wire shall flow smoothly and evenly during welding and shall be capable of producing acceptable welds.
 - 5.2 Spooled Wire: Shall conform to the following, unless otherwise agreed upon by purchaser and vendor:
 - 5.2.1 Cast: Wire shall have imparted to it a curvature such that a specimen sufficient in length to form one loop, when cut from the spool and laid on a flat surface, shall form a circle not less than 15 in. and not greater than 30 in. in diameter.
 - 5.2.2 Helix: The specimen on which cast was determined, when laid on a flat surface and measured between adjacent turns, shall show a vertical separation not greater than 1 inch.