

AERONAUTICAL MATERIAL SPECIFICATION

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

AMS 5637

Issued 3-1-49

Revised

STEEL, CORROSION RESISTANT

18Cr - 8Ni (SAE 30302)

Cold Drawn - 125,000 psi

1. **ACKNOWLEDGMENT:** A vendor shall mention this specification number in all quotations and when acknowledging purchase orders.
2. **FORM:** Bars up to and including 0.75 in. in diameter or distance between parallel sides.
3. **APPLICATION:** Primarily for small parts, such as bolts and screws, requiring corrosion resistance for use up to 700 F and fabricated by machining from bars and roll threading.

4. **COMPOSITION:**

Check Analysis			
Under Min or Over Max			
Carbon	0.08 - 0.15	0.01	0.01
Manganese	2.00 max	—	0.04
Silicon	1.00 max	—	0.05
Phosphorus	0.040 max	—	0.005
Sulfur	0.030 max	—	0.005
Chromium	17.00 - 19.00	0.20	0.20
Nickel	7.00 - 10.00	0.10	0.10

5. **CONDITION:** Solution heat treated, cold drawn, and heated at 700 F and shall be free from continuous carbide network.

6. **TECHNICAL REQUIREMENTS:**

- 6.1 **Physical Properties:** Bars shall conform to the following requirements:

Tensile Strength, psi	125,000 min
Yield Strength at 0.2% offset or at 0.0109 inch in 2 in. extension under load, psi	100,000 min
Elongation, % in 4D	17 min
Reduction of Area, %	45 min
Hardness, Rockwell	C 26-34

7. **QUALITY:** Material shall be uniform in quality and condition, clean, sound, and free from foreign materials and from internal and external defects detrimental to fabrication or to performance of parts.
8. **TOLERANCES:** Tolerances shall conform to the latest issue of AMS 2241 as applicable to cold finished.

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