

# 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.

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 agreement to adhere to the SAE standard or recommended practice, and no commitment to form 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."