

AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
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New York City

AMS 5610B

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STEEL, CORROSION RESISTANT 13 Chromium (Free Machining)

1. **ACKNOWLEDGMENT:** A vendor must mention this specification number and its revision letter in all quotations and when acknowledging purchase orders.
2. **FORM:** Bars, billets, forgings, or as ordered.
3. **COMPOSITION:**

| | |
|-------------------------|---------------|
| Carbon | 0.15 max |
| Manganese | 1.20 max |
| Silicon | 1.00 max |
| Phosphorous | 0.04 max |
| Sulphur or Selenium | 0.18 - 0.35 |
| Chromium | 11.50 - 13.50 |
| Molybdenum or Zirconium | 0.60 max |
4. **CONDITION:** (a) Bars and forgings shall be supplied free machining and to a hardness of Brinell 187-241.

(b) Stock ordered for forging must be supplied in the condition and finish ordered by the forging manufacturer.
5. **HARDENABILITY:** Specimens with sections $\frac{3}{8}$ inch in thickness, out from a bar or forging, shall be placed in a furnace which is at 1750°F, allowed to heat to 1750°F, held 25 minutes and quenched in commercial paraffin oil (100 S.U.V. at 100°F) at room temperature. The specimens shall have a hardness not less than Rockwell C 33.
6. **QUALITY:** This material shall be of uniform quality and condition, free from any defects which affect its machinability or use which is consistent with the type of steel involved. Material defects revealed by machining are cause for rejection of the material.
7. **REPORTS:** The manufacturer shall furnish three copies of a notarized report of the chemical composition of each size and heat in each shipment. This report shall include the purchase order number, heat number, material specification number, size and quantity in each heat. If forgings are supplied, the part number and size of material used to make the forgings shall also be included.
8. **IDENTIFICATION:** (a) Bar stock 2 inches or larger must be stamped with the heat number within 2 inches of one end. Smaller bars may either be stamped with the heat number or securely bundled and identified by a metal tag stamped with the purchase order number, AMS 5610, and heat number.

(b) Forgings shall be identified in accordance with AMS 2808.

(c) Material that cannot be identified at destination is subject to rejection.