

AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
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AMS 5620

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Revised

STEEL, CORROSION RESISTANT 13 Chromium (Medium Carbon) - Hardenable Free Machining

1. ACKNOWLEDGMENT: Vendor shall mention this specification number in all quotations and when acknowledging purchase orders.
2. FORM: Bars, billets, forgings, or as ordered.
3. COMPOSITION:

Carbon	0.30 - 0.40
Manganese	1.20 max
Silicon	1.00 max
Phosphorus	0.04 max
Sulphur or Selenium	0.15 - 0.30
Chromium	12.00 - 14.00
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 shall be supplied in the condition and finish ordered by the forging manufacturer.
5. HARDENABILITY: Specimens with sections 1/2 inch in thickness, cut from a bar or forging, shall be placed in a furnace which is at $1825 \pm 10^{\circ}\text{F}$, allowed to heat to $1825 \pm 10^{\circ}\text{F}$, 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 50.
6. DECARBURIZATION: (a) Bars ordered ground, turned or polished shall not be decarburized.

(b) Allowable decarburization of bars ordered for redrawing or for forging shall be as agreed between purchaser and vendor.
7. QUALITY: Material shall be uniform in quality and condition, sound, and free from foreign material and from internal and external defects which adversely affect its strength, use or machinability which is consistent with the type of steel involved. Material revealing defects during fabrication shall be subject to rejection.
8. TOLERANCES: Unless otherwise specified, tolerances shall conform to AMS 2241 as applicable.