

AERONAUTICAL MATERIAL SPECIFICATION

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

AMS 5615 A

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STEEL CORROSION RESISTANT 13 Chromium - 1.5 Nickel

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	0.10 - 0.15
Manganese	1.25 max
Silicon	0.50 max
Phosphorus	0.04 max
Sulphur	0.04 max
Chromium	11.50 - 13.50
Nickel	1.25 - 2.25
4. **CONDITION:** (a) Bars and forgings shall be supplied in the best condition for machining, and to a hardness of Brinell 207-255.

(b) Stock ordered for forging must be supplied in the condition and finish ordered by the forging manufacturer.
5. **HARDENABILITY:** Specimens with sections 3/8 inch in thickness, cut 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 42.
6. **QUALITY:** (a) This material must be uniform in quality and condition, clean, commercially straight, free from surface or internal defects, and must not reveal material defects during manufacturing processes.

(b) Unless otherwise stated, finished parts are subject to magnetic inspection.
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 5615, 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.