

AERONAUTICAL MATERIAL SPECIFICATION

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

AMS 5025A

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STEEL - FREE CUTTING Manganese (Heat Treated)

1. **ACKNOWLEDGMENT:** A vendor shall 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:**

Individual Bar
Check Analysis
Over or Under

Carbon	0.32 - 0.39	0.02
Manganese	1.35 - 1.65	0.06
Phosphorus	0.045 max	0.008
Sulphur	0.08 - 0.13	--

4. **CONDITION:** (a) Bars shall be quenched and tempered and shall have hardness of Brinell 217 - 255 from surface to center.

(b) Forgings shall be quenched and tempered and shall have hardness of Brinell 217 - 255 from surface to center.

(c) Stock ordered for forging shall be supplied in the condition and finish ordered by the forging manufacturer.

5. **QUALITY:** Steel shall be uniform in quality and condition, sound, and free from foreign materials and from internal and external defects, consistent with the type of steel involved, which adversely affect its strength, use or machinability. Steel in which defects are revealed during fabrication will be subject to rejection.

6. **TOLERANCES:** Unless otherwise specified, bar tolerances shall conform to the latest issue of AMS 2231 as applicable. Diameter or thickness tolerances shall conform to Table II.

7. **REPORTS:** (a) Unless otherwise specified, the vendor of bars or forgings shall furnish three copies of a notarized report of the chemical composition of each 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 steel used to make the forgings shall also be included.

(b) Unless otherwise specified, the vendor of finished or semi-finished parts shall furnish with each shipment three copies of a notarized report showing the purchase order number, material specification number, contractor or other direct supplier of steel, part number, and quantity. When steel for making parts is produced or purchased by the parts vendor, that vendor shall inspect each lot of steel to determine conformance to the requirements of this specification, and shall include in the report a certification that the steel conforms, or shall include copies of the laboratory reports showing the results of tests to determine conformance.

8. IDENTIFICATION: (a) Unless otherwise specified, bar stock shall be securely bundled and identified by a metal tag stamped with AMS 5025A, or boxed and the identification tag enclosed. Bar stock not bundled or boxed shall be tagged individually or stamped within 2 inches of one end.

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

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

9. REJECTIONS: Material not conforming to this specification or to authorized modifications shall be subject to rejection. Unless otherwise stipulated, rejected material or parts will be returned to vendor at vendor's expense, unless purchaser receives, within three weeks of notification of rejection, other instructions for disposition.

NOTE. SIMILAR SPECIFICATION: SAE 1137 is listed for information only and shall not be construed as an acceptable alternate unless all requirements of this AMS are met.