



AEROSPACE MATERIAL SPECIFICATION	AMS6509™	REV. B
	Issued	2012-05
	Revised	2022-09
Superseding AMS6509A		
Steel Bars and Forgings 3.5Cr - 7.5Ni - 16.3Co - 1.75Mo - 0.2W - (0.09 - 0.13C) Double Vacuum Melted, Normalized, Annealed (Composition similar to UNS K92731)		

RATIONALE

AMS6509B is the result of a Five-Year Review and update of the specification. The revision includes clarification of size limits (1.1, 3.3, 3.5.3.1), composition updates (3.1, 3.1.1), adds strain rate control (3.5.3.1.1.3), prohibits unauthorized exceptions (3.5.3.1.5, 3.8, 4.4.4, 5.2.1, 8.5. 8.7), adds finish information (8.4), and allows prior provisions (8.6).

1. SCOPE

1.1 Form

This specification covers a premium aircraft-quality alloy steel in the form of bars and forgings 199 square inches (1284 cm²) and under in cross section, and forging stock of any size.

1.2 Application

These products have been used typically for carburized parts requiring high minimum core hardness with a narrow range, reduced distortion and subject to magnetic particle inspection standards, but usage is not limited to such applications.

2. APPLICABLE DOCUMENTS

The issue of the following documents in effect on the date of the purchase order forms a part of this specification to the extent specified herein. The supplier may work to a subsequent revision of a document unless a specific document issue is specified. When the referenced document has been cancelled and no superseding document has been specified, the last published issue of that document shall apply.

2.1 SAE Publications

Available from SAE International, 100 Commonwealth Drive, Warrendale, PA 15096-0001, Tel: 877-606-7323 (inside USA and Canada) or +1 724-776-4970 (outside USA), www.sae.org.

AMS2251 Tolerances, Low-Alloy Steel Bars

AMS2259 Chemical Check Analysis Limits, Wrought Low-Alloy and Carbon Steels

AMS2300 Steel Cleanliness, Premium Aircraft-Quality Magnetic Particle Inspection Procedure

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