



<b>AEROSPACE MATERIAL SPECIFICATION</b>	<b>AMS6494™</b>	<b>REV. C</b>
	Issued 2009-09 Revised 2022-09	
Superseding AMS6494B		
Steel Bars, Forgings, Mechanical Tubing, and Forging Stock 1.0Cr - 2.50Ni - 2.0Mo - 1.10Si (0.10 - 0.20C) Aircraft-Quality (Composition similar to UNS K51570)		

### RATIONALE

AMS6494C is the result of a Five-Year Review and update of the specification. The revision updates the title and clarifies the application (1.2), prohibits unauthorized exceptions (3.6, 4.4.5, 5.2.1.1, 8.6), updates composition and reporting (3.1, 3.1.1), adopts composition limits for grain size testing (Table 1, 3.3.2.2, 4.4.1, 8.4), adds macrostructure limits (3.3.1, 8.8), removes engineering approval for larger macrostructure limits (Table 2), adds strain rate (3.3.1) acknowledges process qualification per AMS2301 (4.2.1, 4.4.4), and allows prior revisions (8.7).

#### 1. SCOPE

##### 1.1 Form

This specification covers an aircraft-quality, low-alloy steel in the form of bars, forgings, mechanical tubing, and forging stock.

##### 1.2 Application

These products have been used typically for carburized parts requiring a hardened case with a relatively strong core, 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 warrant 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, 400 Commonwealth Drive, Warrendale, PA 15096-0001, Tel: 877-606-7323 (inside USA and Canada) or +1 724-776-4970 (outside USA), [www.sae.org](http://www.sae.org).

AMS2251 Tolerances, Low-Alloy Steel Bars

AMS2253 Tolerances, Carbon and Alloy Steel Tubing

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

SAE International Standards Committee Rules provide that: "This report is published by SAE to advance the state of technical and engineering sciences. The use of this report is entirely voluntary, and its applicability and suitability for any particular use, including any patent infringement arising therefrom, is the sole responsibility of the user."

SAE reviews each technical report at least every five years at which time it may be revised, reaffirmed, stabilized, or cancelled. SAE invites your written comments and suggestions.

Copyright © 2022 SAE International

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of SAE.

**TO PLACE A DOCUMENT ORDER:** Tel: 877-606-7323 (inside USA and Canada)  
Tel: +1 724-776-4970 (outside USA)  
Fax: 724-776-0790  
Email: [CustomerService@sae.org](mailto:CustomerService@sae.org)  
http://www.sae.org

SAE WEB ADDRESS:

**For more information on this standard, visit**  
<https://www.sae.org/standards/content/AMS6494C/>