



AEROSPACE MATERIAL SPECIFICATION

AMS6476™**REV. G**

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Superseding AMS6476F

Steel, Bars, Forgings, Mechanical Tubing, and Forging Stock,
0.50Cr - 0.12Mo (0.89 - 1.01C)
(Composition similar to UNS K19526)

RATIONALE

AMS6476G has been declared "STABILIZED" by AMS Committee E. This document will no longer be updated and may no longer represent standard industry practice. This document was stabilized because this document contains mature technology that is not expected to change, and thus no further revisions are anticipated.

NOTE: Previously, this document was "REVISED." The last technical update of this document occurred in November 2021. Users of this document should refer to the cognizant engineering organization for disposition of any issues with reports/certifications to this specification, including exceptions listed on the certification. In many cases, the purchaser may represent a sub-tier supplier and not the cognizant engineering organization.

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Documents



Standard, visit Sharing Hub

1. SCOPE

1.1 Form

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

1.2 Application

These products have been used typically for bearing components requiring a through-hardening steel usually with hardness of approximately 60 HRC and section thickness under 0.50 inch (12.7 mm), 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, 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.

AMS2251	Tolerances, Low-Alloy Steel Bars
AMS2253	Tolerances, Carbon and Alloy Steel Tubing
AMS2259	Chemical Check Analysis Limits, Wrought Low-Alloy and Carbon Steels
AMS2370	Quality Assurance Sampling and Testing, Carbon and Low-Alloy Steel Wrought Products and Forging Stock
AMS2372	Quality Assurance Sampling and Testing, Carbon and Low-Alloy Steel Forgings

AMS2806	Identification Bars, Wire, Mechanical Tubing, and Extrusions, Carbon and Alloy Steels and Corrosion and Heat-Resistant Steels and Alloys
AMS2808	Identification Forgings
ARP1917	Clarification of Terms Used in Aerospace Metals Specifications
AS1182	Standard Stock Removal Allowance, Aircraft-Quality and Premium Aircraft-Quality Steel, Bars and Mechanical Tubing

2.2 ASTM Publications

Available from ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959, Tel: 610-832-9585, www.astm.org.

ASTM A370	Mechanical Testing of Steel Products
ASTM A751	Chemical Analysis of Steel Products
ASTM E45	Determining the Inclusion Content of Steel
ASTM E140	Conversion Tables for Metals Relationship Among Brinell Hardness, Vickers Hardness, Rockwell Hardness, Superficial Hardness, Knoop Hardness, Scleroscope Hardness, and Leeb Hardness
ASTM E381	Macroetch Testing Steel Bars, Billets, Blooms, and Forgings
ASTM E1077	Estimating the Depth of Decarburization of Steel Specimens

3. TECHNICAL REQUIREMENTS

3.1 Composition

Shall conform to the percentages by weight shown in Table 1, determined in accordance with ASTM A751 or by other analytical methods acceptable to purchaser.

Table 1 - Composition

Element	Min	Max
Carbon	0.89	1.01
Manganese	0.50	0.80
Silicon	0.15	0.35
Phosphorus	--	0.025
Sulfur	--	0.025
Chromium	0.40	0.60
Molybdenum	0.08	0.15
Nickel	--	0.25
Copper	--	0.35

3.1.1 Check Analysis

Composition variations shall meet the applicable requirements of AMS2259.

3.2 Condition

The product shall be supplied in the following condition; hardness and tensile strength shall be determined in accordance with ASTM A370: