



AEROSPACE MATERIAL SPECIFICATION

AMS5762™**REV. H**

Issued 1971-05
Reaffirmed 2021-05
Revised 2025-10

Superseding AMS5762G

(R) Steel, Corrosion-Resistant, Bars, Wire, Forgings and Forging Stock,
5.8Mn - 17Cr - 5.8Ni - 2.0Cu - 0.26S (203 EZ),
Free Machining, Solution Heat Treated
(Composition similar to UNS S20300)

RATIONALE

AMS5762H is the result of a Five-Year Review and update of the specification. The revision updates the Title to match the Scope and adds the trade name for the material (see 8.7), revises composition testing and reporting (see 3.1 and 3.1.1), adds strain rate control (see 3.3.1.1), addresses stock removal (see 3.4.2 and 8.5), updates reporting of bar (see 4.4.2), adds allowance for ordering forging stock (see 4.4.3 and 8.8), allows the use of prior revisions (see 8.4), and prohibits unauthorized exceptions (see 3.5, 4.4.4, 5.2.1.1, and 8.6).

1. SCOPE

1.1 Form

This specification covers a free-machining, corrosion-resistant steel in the form of bars, wire, forgings, and forging stock.

1.2 Application

This product has been used typically for parts on which the amount of machining warrants use of a free-machining grade of steel, requiring corrosion resistance similar to the 18-8 type steels but not subjected to temperatures exceeding 700 °F (371 °C) during fabrication or in service, 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 (U.S. and Canada only) or +1 724-776-4970 (outside U.S. and Canada), www.sae.org.

AMS2241 Tolerances, Corrosion- and Heat-Resistant Steel, Iron Alloy, Titanium, and Titanium Alloy Bars and Wire

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Documents

Standard, visit Sharing Hub

AMS2248	Chemical Check Analysis Limits, Corrosion- and Heat-Resistant Steels and Alloys, Maraging and Other Highly Alloyed Steels, and Iron Alloys
AMS2371	Quality Assurance Sampling and Testing, Corrosion and Heat-Resistant Steels and Alloys, Wrought Products and Forging Stock
AMS2374	Quality Assurance Sampling and Testing, Corrosion- and Heat-Resistant Steel and Alloy Forgings
AMS2806	Identification, Bars, Wire, Mechanical Tubing, and Extrusions, Carbon and Alloy Steels and Corrosion and Heat-Resistant Steels and Alloys
AMS2808	Identification, Forgings
AS1182	Standard Stock Removal Allowance, Aircraft-Quality and Premium Aircraft-Quality Steel, Bars and Mechanical Tubing
AS7766	Terms Used in Aerospace Metals Specifications
HS-1086	Metals and Alloys in the Unified Numbering System

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 E140	Hardness Conversion Tables for Metals Relationship Among Brinell Hardness, Vickers Hardness, Rockwell Hardness, Superficial Hardness, Knoop Hardness, Scleroscope Hardness, and Leeb Hardness

2.3 Definitions

Terms used in AMS are defined in AS7766.

3. TECHNICAL REQUIREMENTS

3.1 Composition

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 the purchaser.

Table 1 - Composition

Element	Min	Max
Carbon	--	0.08
Manganese	5.00	6.50
Silicon	0.20	0.70
Phosphorus	--	0.04
Sulfur	0.15	0.35
Chromium	16.00	18.00
Nickel	5.00	6.50
Copper	1.75	2.25
Molybdenum	--	0.50