



AEROSPACE MATERIAL SPECIFICATION

AMS5506™

REV. G

Issued	1952-11
Reaffirmed	2012-04
Revised	2018-03

Superseding AMS5506F

Steel, Corrosion and Heat Resistant, Sheet, Strip, and Plate

13Cr (0.30 - 0.40C) (420)

Annealed

(Composition similar to UNS S42000)

RATIONALE

AMS5506G revises Composition analysis standards (3.1), Bending (3.3.2), Reports (4.4) and Identification (5.1.1) and results from a Five-Year Review and update of this specification.

1. SCOPE

1.1 Form

This specification covers a corrosion and moderate heat resistant steel in the form of sheet, strip, and plate.

1.2 Application

These products have been used typically for parts, such as snap rings and flat springs, requiring corrosion and oxidation resistance up to 800 °F (427 °C), 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.

AMS2242 Tolerances, Corrosion and Heat Resistant Steel, Iron Alloy, Titanium, and Titanium Alloy Sheet, Strip, and Plate

AMS2248 Chemical Check Analysis Limits, Corrosion and Heat Resistant Steels and Alloys, Maraging and Other Highly Alloyed Steels, and Iron Alloys

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AMS2371	Quality Assurance Sampling and Testing, Corrosion and Heat Resistant Steels and Alloys, Wrought Products and Forging Stock
AMS2807	Identification, Carbon and Low-Alloy Steels, Corrosion and Heat Resistant Steels and Alloys, Sheet, Strip, Plate, and Aircraft Tubing
ARP1917	Clarification of Terms Used in Aerospace Metals Specifications
AS4194	Sheet and Strip Surface Finish Nomenclature

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 A480/A480M	Flat-Rolled Stainless and Heat-Resisting Steel Plate, Sheet, and Strip
ASTM A751	Test Methods, Practices, and Terminology for Chemical Analysis of Steel Products
ASTM E8/E8M	Tension Testing of Metallic Materials
ASTM E140	Hardness Conversion Tables for Metals Relationship Among Brinell Hardness, Vickers Hardness, Rockwell Hardness, Superficial Hardness, Knoop Hardness, Scleroscope Hardness, and Leeb Hardness
ASTM E290	Bend Testing of Material for Ductility

3. TECHNICAL REQUIREMENTS

3.1 Composition

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

Table 1 - Composition

Element	Min	Max
Carbon	0.30	0.40
Manganese	--	1.00
Silicon	--	1.00
Phosphorus	--	0.040
Sulfur	--	0.030
Chromium	12.00	14.00
Nickel	--	0.50
Molybdenum	--	0.50
Aluminum	--	0.15
Copper	--	0.50
Tin	--	0.05

3.1.1 Check Analysis

Composition variations shall meet the applicable requirements of AMS2248.