



# AEROSPACE MATERIAL SPECIFICATION

AMS5513™

REV. L

Issued	1953-06
Reaffirmed	2015-05
Revised	2022-03

Superseding AMS5513K

Steel, Corrosion-Resistant, Sheet, Strip, and Plate  
19Cr - 9.2Ni (SAE 30304)  
Solution Heat Treated  
(Composition similar to UNS S30400)

## RATIONALE

AMS5513L is the result of a limited scope ballot to provide an implementation time for a new test procedure (3.3.1.1).

### 1. SCOPE

#### 1.1 Form

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

#### 1.2 Application

These products have been used typically for formed and drawn parts requiring corrosion resistance up to 800 °F (427 °C), but usage is not limited to such applications. Welding, brazing, or other exposure to temperatures over 800 °F (427 °C) during fabrication may impair corrosion resistance.

### 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 supplied 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](http://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
AMS2371	Quality Assurance Sampling and Testing, Corrosion and Heat-Resistant Steels and Alloys, Wrought Products and Forging Stock

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SAE WEB ADDRESS:

For more information on this standard, visit  
<https://www.sae.org/standards/content/AMS5513L/>

- AMS2807 Identification, Carbon and Low-Alloy Steels, Corrosion and Heat-Resistant Steels and Alloys, Sheet, Strip, Plate, and Aircraft Tubing
- AS4194 Sheet and Strip Surface Finish Nomenclature
- AS7766 Terms Used in Aerospace Metals Specifications

## 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](http://www.astm.org).

- ASTM A262 Detecting Susceptibility to Intergranular Attack in Austenitic Stainless Steels
- ASTM A370 Mechanical Testing of Steel Products
- ASTM A480/A480M Flat Rolled Stainless and Heat-Resisting Steel Plate, Sheet, and Strip
- 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
- 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 in accordance with ASTM A751, or by other analytical methods acceptable to purchaser.

**Table 1 - Composition**

Element	Min	Max
Carbon	--	0.08
Manganese	--	2.00
Silicon	--	1.00
Phosphorus	--	0.040
Sulfur	--	0.030
Chromium	18.00	20.00
Nickel	8.00	10.50
Molybdenum	--	0.75
Copper	--	0.75

#### 3.1.1 Check Analysis

Composition variations shall meet the applicable requirements of AMS2248.

### 3.2 Condition

The product shall be supplied in the following condition:

#### 3.2.1 Sheet and Strip

Hot or cold rolled, solution heat treated, and, unless solution heat treatment is performed in an atmosphere yielding a bright finish, descaled having a surface appearance in accordance with ASTM A480/A480M, AS4194 and 3.2.1.1 or 3.2.1.2, as applicable.