



# AEROSPACE MATERIAL SPECIFICATION

AMS5045™

REV. K

Issued	1945-07
Reaffirmed	2013-10
Revised	2019-04

Superseding AMS5045J

Steel, Sheet and Strip  
0.25 Carbon, Maximum  
Hard Temper  
(Composition similar to UNS G10200)

## RATIONALE

AMS5045K results from a Five-Year Review and update of this specification that includes additional composition analytical methods (3.1), unauthorized exceptions (3.6), and revises reporting (4.4.2) and identification (5.1).

### 1. SCOPE

#### 1.1 Form

This specification covers a carbon steel in the form of sheet and strip.

#### 1.2 Application

These products have been used typically for stamped parts requiring strength, imparted by rolling, rather than ductility, 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.

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## 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).

AMS2232	Tolerances, Carbon Steel, Sheet, Strip, and Plate
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
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

## 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 A370	Mechanical Testing of Steel Products
ASTM A751	Standard Test Methods, Practices, and Terminology for 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

## 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	--	0.25
Manganese	0.30	0.60
Phosphorus	--	0.035
Sulfur	--	0.040

#### 3.1.1 Check Analysis

Composition variations shall meet the applicable requirements of AMS2259.

### 3.2 Condition

Product shall be cold rolled.

### 3.3 Properties

The product shall conform to the following requirements: