SAE Aerospace
An SAE International Group

AEROSPACE MATERIAL SPECIFICATION

SAE AMS 5062G

Issued SEP 1948
Reaffirmed SEP 2000
Revised MAR 2004
Superseding AMS 5062F

Steel, Low Carbon
Bars, Forgings, Tubing, Sheet, Strip, and Plate
0.25 Carbon, Maximum

(Composition similar to UNS K02508)

1. SCOPE:

1.1 Form:

This specification covers low-carbon steel in the form of bars, forgings, mechanical tubing, sheet, strip, plate, and forging stock.

1.2 Application:

These products have been used typically for parts for which a wide latitude in composition is permissible and requiring no particular strength or hardness other than that inherent in steel of this type, but usage is not limited to such applications.

1.2.1 Care is required in welding in the event that carbon and manganese approach the maximum limits.

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, 400 Commonwealth Drive, Warrendale, PA 15096-0001 or www.sae.org.

AMS 2231	Tolerances, Carbon Steel Bars
AMS 2232	Tolerances, Carbon Steel Sheet, Strip, and Plate
AMS 2253	Tolerances, Carbon and Alloy Steel Tubing
AMS 2259	Chemical Check Analysis Limits, Wrought Low-Alloy and Carbon Steels

TO PLACE A DOCUMENT ORDER: **Tel: 877-606-7323 (inside USA and Canada)**
Tel: 724-776-4970 (outside USA)
Fax: 724-776-0790
Email: custsvc@sae.org
SAE WEB ADDRESS: **http://www.sae.org**

2.1 (Continued):

AMS 2370	Quality Assurance Sampling and Testing, Carbon and Low-Alloy Steel Wrought Products and Forging Stock
AMS 2372	Quality Assurance Sampling and Testing, Carbon and Low-Alloy Steel Forgings
AMS 2806	Identification, Bars, Wire, Mechanical Tubing, and Extrusions, Carbon and Alloy Steels and Heat and Corrosion Resistant Steels and Alloys
AMS 2807	Identification, Carbon and Low-Alloy Steels, Corrosion and Heat Resistant Steels and Alloys, Sheet, Strip, Plate, and Aircraft Tubing
AMS 2808	Identification, Forgings

2.2 ASTM Publications:

Available from ASTM, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959 or www.astm.org.

ASTM E 350	Chemical Analysis of Carbon Steel, Low-Alloy Steel, Silicon Electrical Steel, Ingot Iron, and Wrought Iron

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 E 350, by spectrochemical methods, or by other analytical methods acceptable to purchaser.

TABLE 1 - Composition

Element	min	max
Carbon	--	0.25
Manganese	--	1.00
Phosphorus	--	0.040
Sulfur	--	0.050

3.1.1 Check Analysis: Composition variations shall meet the applicable requirements of AMS 2259.

3.2 Condition:

The product shall be supplied in the following condition:

3.2.1 Bars and Mechanical Tubing 2.50 Inches (63.5 mm) and Under in Nominal OD or Least Distance Between Parallel Sides: Cold finished.

3.2.2 Bars and Mechanical Tubing Over 2.50 Inches (63.5 mm) in Nominal OD or Least Distance Between Parallel Sides: Hot finished and normalized or otherwise heat treated to produce optimum machinability.

3.2.3 Forgings: Normalized or otherwise heat treated to produce optimum machinability.

3.2.4 Sheet, Strip, and Plate: As rolled.

3.2.5 Forging Stock: As ordered by the forging manufacturer.

3.3 Quality:

The product, as received by purchaser, shall be uniform in quality and condition, sound, and free from foreign materials and from imperfections detrimental to usage of the product.

3.4 Tolerances:

Shall be as follows:

3.4.1 Bars: Shall conform to all applicable requirements of AMS 2231.

3.4.2 Mechanical Tubing: Shall conform to all applicable requirements of AMS 2253.

3.4.3 Sheet, Strip, and Plate: Shall conform to all applicable requirements of AMS 2232.

4. QUALITY ASSURANCE PROVISIONS:

4.1 Responsibility for Inspection:

The vendor of the product shall supply all samples for vendor's tests and shall be responsible for the performance of all required tests. Purchaser reserves the right to sample and to perform any confirmatory testing deemed necessary to ensure that the product conforms to specified requirements.

4.2 Classification of Tests:

All technical requirements are acceptance tests and shall be performed on each heat or lot as applicable.

4.3 Sampling and Testing:

Shall be as follows:

4.3.1 Bars, Mechanical Tubing, Sheet, Strip, Plate, and Forging Stock: In accordance with AMS 2370.

4.3.2 Forgings: In accordance with AMS 2372.

4.4 Reports:

The vendor of the product shall furnish with each shipment a report showing the results of tests for composition of each heat and stating that the product conforms to the other technical requirments.. This report shall include the purchase order number, heat and lot numbers, AMS 5062G, size, and quantity. If forgings are supplied, the size and melt source of stock used to make the forgings shall also be included.

4.5 Resampling and Retesting:

Shall be as follows:

4.5.1 Bars, Mechanical Tubing, Sheet, Strip, Plate, and Forging Stock: In accordance with AMS 2370.

4.5.2 Forgings: In accordance with AMS 2372.

5. PREPARATION FOR DELIVERY:

5.1 Sizes:

Except when exact lengths or multiples of exact lengths are ordered, straight bars and tubing will be acceptable in mill lengths of 6 to 20 feet (1.8 to 6.1 m) but not more than 10% of any shipment shall be supplied in lengths shorter than 10 feet (3 m).

5.2 Identification:

Shall be as follows:

5.2.1 Bars and Tubing: Shall be in accordance with AMS 2806.

5.2.2 Forgings: Shall be in accordance with AMS 2808.

5.2.3 Sheet, Strip, and Plate: Shall be in accordance with AMS 2807.

5.2.4 Forging Stock: Shall be as agreed upon by purchaser and vendor.

5.3 Protective Trteatment:

The product shall be protected from corrosion prior to shipment.

5.4 Packaging:

The product shall be prepared for shipment in accordance with commercial practice and in compliance with applicable rules and regulations pertaining to the handling, packaging, and transportation of the product to ensure carrier acceptance and safe delivery.