

# AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.  
29 West 39th Street  
New York City

## AMS 5591

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Revised

### STEEL TUBING, CORROSION RESISTANT Seamless 13 Chromium

1. **ACKNOWLEDGMENT:** A vendor shall mention this specification number in all quotations and when acknowledging purchase orders.

2. **COMPOSITION:**

Carbon	0.15 max
Manganese	1.00 max
Silicon	1.00 max
Copper	1.50 max
Phosphorus	0.04 max
Sulphur	0.04 max
Chromium	11.50 - 13.50
Nickel	0.50 max

3. **CONDITION:** Tubing shall be supplied cold finished and annealed, if necessary, in the best condition for machining, with hardness of Brinell 187-255, or Rockwell B91-102, unless otherwise specified.

4. **QUALITY:** (a) Tubing shall be uniform in quality and condition, clean, sound, smooth, and free from surface and internal defects detrimental to fabrication or to performance of parts. If harmful defects are revealed during fabrication, tubing shall be subject to rejection.

(b) Tubing and parts made therefrom shall be subject to inspection by any method which will reveal defects.

5. **TOLERANCES:** Unless otherwise specified, tolerances shall conform to AMS 2243 as applicable and/or as specified below:

(a) Diameter - Table I, column headed "Annealed".

6. **REPORTS:** (a) Unless otherwise specified, the vendor of tubing shall supply with each shipment three copies of a notarized report giving results of tests made to determine conformance or stating that hardness and chemical composition of the tubing conform to the requirements specified. This report shall include the purchase order number, material specification number, size, and quantity.

(b) Unless otherwise specified, the vendor of finished or semi-finished parts shall supply with each shipment three copies of a notarized report showing the purchase order number, material specification number, contractor or other direct supplier of tubing, part number, and quantity. When tubing for making parts is produced or purchased by the parts vendor, the vendor shall inspect each lot of tubing to determine conformance to the requirements of this specification, and shall include in the report a certification that the tubing conforms, or shall include copies of the laboratory report showing the results of tests to determine conformance.