

# AERONAUTICAL MATERIAL SPECIFICATION

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

## AMS5085

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Revised

STEEL SHEET AND STRIP  
0.47-0.56C (SAE 1050)

1. ACKNOWLEDGMENT: A vendor shall mention this specification number in all quotations and when acknowledging purchase orders.
2. FORM: Sheet, strip, and plate.
3. APPLICATION: Primarily for stamped or formed parts which may subsequently be heat treated.
4. COMPOSITION:

Check Analysis			
Under Min or Over Max			
Carbon	0.47 - 0.56	0.03	0.05
Manganese	0.60 - 0.90	0.04	0.04
Phosphorus	0.04 max	--	0.01
Sulfur	0.05 max	--	0.01

5. CONDITION: Unless otherwise specified, material shall be supplied cold-rolled and annealed in thicknesses of 0.062 in. and under, and either cold or hot-rolled and annealed, as ordered, in thicknesses over 0.062 inch.
6. TECHNICAL REQUIREMENTS:
  - 6.1 Hardness: Shall be not higher than Rockwell B 85 or equivalent.
  - 6.2 Bending: Material shall withstand, without cracking, bending at room temperature through an angle of 180 deg around a diameter equal to the nominal thickness of the material with axis of bend perpendicular to direction of rolling, and around a diameter equal to twice the nominal thickness of the material with axis of bend parallel to the direction of rolling.
  - 6.3 Decarburization: Material shall be free from complete decarburization as determined microscopically, and free from partial decarburization to the extent that the increase in hardness from the surface to the point of maximum sub-surface hardness of an oil hardened specimen will be not more than two points on the Rockwell Superficial 30-N scale.
7. QUALITY: Material shall be uniform in quality and condition, clean, sound, smooth, and free from foreign materials and from internal and external defects detrimental to fabrication or to performance of parts.
8. TOLERANCES: Unless otherwise specified, tolerances shall conform to the latest issue of AMS 2232 as applicable.