



AEROSPACE MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
485 LEXINGTON AVENUE, NEW YORK, N. Y. 10017

AMS 5121C

Superseding AMS 5121B

Issued 6-1-42

Revised 5-1-68

STEEL STRIP (0.89-1.04C)(SAE 1095)

1. **ACKNOWLEDGMENT:** A vendor shall mention this specification number and its revision letter in all quotations and when acknowledging purchase orders.
2. **APPLICATION:** Primarily for heat treated springs, shims, spacers, and other applications where spring temper is required.
3. **COMPOSITION:**

	min	max
Carbon	0.89 - 1.04	
Manganese	0.30 - 0.50	
Silicon	0.15 - 0.30	
Phosphorus	--	0.040
Sulfur	--	0.050

- 3.1 **Check Analysis:** Composition variables shall meet the requirements of the latest issue of AMS 2259, paragraph titled "Carbon Steels, Sheet, Strip, Plate, and Flat Wire".
4. **CONDITION:** Unless otherwise ordered, the product shall be supplied in the following condition:
 - 4.1 **Thicknesses Up to 0.063 In., Incl:** Cold rolled and annealed, having hardness not higher than Rockwell B 85 or equivalent.
 - 4.2 **Thicknesses Over 0.063 In:** Cold rolled and annealed; or hot rolled, annealed, and descaled, having hardness not higher than Rockwell B 85 or equivalent.
5. **TECHNICAL REQUIREMENTS:** When ASTM methods are specified for determining conformance to the following requirements, tests shall be conducted in accordance with the issue of the ASTM method listed in the latest issue of AMS 2350.
 - 5.1 **Bending:** Material shall withstand, without cracking, bending at room temperature through an angle of 180 deg around a diameter equal to the bend factor times the nominal thickness.

Axis of Bend	Bend Factor
Parallel to direction of rolling	2
Perpendicular to direction of rolling	1

- 5.2 **Decarburization:** The product shall be free from complete decarburization as determined microscopically. It shall also be free from partial decarburization to the extent that the increase in hardness from the surface to the point of maximum subsurface hardness of an oil hardened specimen will be not more than two points on the Rockwell 30-N scale.
- 5.3 **Grain Size:** Predominantly 5 or finer with occasional grains as large as 3 permissible, ASTM E112, McQuaid-Ehn test.