



AEROSPACE MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
TWO PENNSYLVANIA PLAZA, NEW YORK, N.Y. 1000

AMS 5120F

Superseding AMS 5120E

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STEEL STRIP (0.68-0.80C) (SAE 1074)

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, spring pins, shims, spacers, and other applications where spring temper is required.
3. **COMPOSITION:**

	min	max
Carbon	0.68 - 0.80	
Manganese	0.50 - 0.80	
Silicon	0.15 - 0.30	
Phosphorus	--	0.040
Sulphur	--	0.050

- 3.1 **Check Analysis:** Composition variations 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 specified, material shall be supplied in the following condition:
 - 4.1 **Thicknesses Up to 1/16 In., Incl:** Cold rolled and annealed, having hardness not higher than ϕ Rockwell B 85 or equivalent.
 - 4.2 **Thicknesses Over 1/16 In.:** Cold rolled and annealed or hot rolled, descaled, and annealed, having hardness not higher than Rockwell B 85 or equivalent.
5. **TECHNICAL REQUIREMENTS:**
 - 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.

Bend Factor

Bend parallel to direction of rolling	2
Bend 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, protected during heat treatment to prevent changes in surface carbon content, will be not more than two points on the Rockwell Superficial 30-N scale.
6. **QUALITY:** Material shall be uniform in quality and condition, clean, sound, and free from foreign materials and from internal and external imperfections detrimental to fabrication or to performance of parts.
7. **TOLERANCES:** Unless otherwise specified, tolerances shall conform to all applicable requirements of the latest issue of AMS 2232.