



AEROSPACE MATERIAL SPECIFICATION

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

AMS 5122C

Superseding AMS 5122B

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

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 washers and other stamped parts requiring smooth finish and no forming or only slight forming.

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: Cold finished.

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 Hardness: Shall be Rockwell C 47 - 52 or equivalent.

5.2 Bending: Material or finished parts shall be capable of bending sufficiently to take a permanent deformation without cracking, with axis of bend parallel to the direction of rolling.

5.3 Finish: Material shall have a bright finish as produced by cold rolling or polishing. A clean, blue finish as produced by heating at low temperature is acceptable.

5.4 Grain Size: Predominantly 5 or finer with occasional grains as large as 3 permissible, ASTM E112, ∅ McQuaid-Ehn test.

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, thickness, width, and straightness tolerances shall conform to the following:

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7.1 Thickness:

Nominal Thickness Inch	Tolerance, Inch, Plus and Minus		
	Width Ranges, Inches		
	Up to 2, incl	Over 2 to 6, incl	Over 6 to 9, incl
Up to 0.019, incl	0.001	0.001	0.0015
Over 0.019 to 0.034, incl	0.001	0.0015	0.002
Over 0.034 to 0.080, incl	0.0015	0.002	0.003
Over 0.080	0.002	0.003	0.004
Maximum variation in any one strip	0.0005	0.001	0.002

7.2 Width:

Nominal Thickness Inch	Tolerance, Inch Plus and Minus
Up to 0.068, incl	0.005
Over 0.068	0.010

7.3 Straightness:

7.3.1 Widths 1.5 In. and Under: Shall be of such straightness that the maximum edgewise curvature (depth of arc) shall not exceed 0.50 in. in any 8 ft of length or 0.0625 in. x length in feet or shorter lengths.

7.3.2 Widths Over 1.5 Inches: Shall be of such straightness that the maximum edgewise curvature (depth of arc) shall not exceed 0.25 in. in any 8 ft of length or 0.03125 in. x length in feet for shorter lengths.

8. REPORTS:

8.1 Unless otherwise specified, the vendor of the product shall furnish with each shipment three copies of a report of the results of tests for chemical composition of each heat in the shipment. This report shall include the purchase order number, material specification number and its revision letter, thickness, size, and quantity from each heat.

8.2 Unless otherwise specified, the vendor of finished or semi-finished parts shall furnish with each shipment three copies of a report showing the purchase order number, material specification number and its revision letter, contractor or other direct supplier of material, part number, and quantity. When material for making parts is produced or purchased by the parts vendor, that vendor shall inspect each lot of material to determine conformance to the requirements of this specification, and shall include in the report a statement that the material conforms, or shall include copies of laboratory reports showing the results of tests to determine conformance.

9. IDENTIFICATION: Unless otherwise specified, each strip shall be marked as in 9.1 unless purchaser permits a method from 9.2.