



AEROSPACE MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
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AMS 5042F

Superseding AMS 5042E

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CARBON STEEL SHEET AND STRIP Forming Grade

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 drawn and formed parts requiring a material of fair ductility.
3. COMPOSITION:

	min	max
Carbon	--	0.15
Manganese	0.25 - 0.60	
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".

4. CONDITION: Unless otherwise ordered, the product shall be supplied cold rolled.

5. TECHNICAL REQUIREMENTS:

- 5.1 Hardness:

Nominal Thickness
Inch

Hardness

Up to 0.187, incl
Over 0.187

Rockwell B 52 - 64
Rockwell B 45 - 64

- 5.1.1 Acceptability of material 0.089 in. and under in thickness shall be based on conformance to one of the following requirements as applicable:

Nominal Thickness
Inch

Hardness
(Equivalent to Rockwell B 52 - 64)

0.009 to 0.014, incl
Over 0.014 to 0.027, incl
Over 0.027 to 0.059, incl
Over 0.059 to 0.089, incl

Vickers (1 kg load) 95 - 115
Rockwell Superficial 15-T 77 - 82
Rockwell Superficial 30-T 51 - 60
Rockwell F 86 - 94

- 5.2 Bending: Sheet and strip shall withstand, without cracking, bending at room temperature flat on itself with axis of bend parallel to the direction of rolling.
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.

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