



# AEROSPACE MATERIAL SPECIFICATION

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

**AMS 5047A**  
Superseding AMS 5047

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## STEEL SHEET AND STRIP Low Carbon, Aluminum Killed Forming

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 deep drawn and formed parts requiring a material of high ductility, and where parts are to be welded.
3. **COMPOSITION:**

	min	max
Carbon	0.08	- 0.13
Manganese	0.30	- 0.60
Silicon	--	0.20
Phosphorus	--	0.04
Sulfur	--	0.05

- 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:** Aluminum killed, cold rolled, and annealed.

5. **TECHNICAL REQUIREMENTS:**

- 5.1 **Hardness:** Shall be not higher than Rockwell B 55 or equivalent.

- 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, max (Equivalent to Rockwell B 55)
0.009 to 0.014, incl	Vickers (1 kg load) 99
Over 0.014 to 0.027, incl	Rockwell Superficial 15-T 79
Over 0.027 to 0.059, incl	Rockwell Superficial 30-T 53
Over 0.059 to 0.089, incl	Rockwell F 88

- 5.2 **Bending:** Material shall withstand, without cracking or producing an "orange peel" surface, bending at room temperature flat on itself with axis of bend parallel to 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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