

AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
29 West 39th Street
New York City

AMS 5047

Issued 11-1-54

Revised

STEEL SHEET AND STRIP Low Carbon, Aluminum Killed Forming

1. **ACKNOWLEDGMENT:** A vendor shall mention this specification number 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:**

Check Analysis			
Under Min or Over Max			
Carbon	0.08 - 0.13	0.02	0.03
Manganese	0.30 - 0.50	0.03	0.03
Silicon	0.20 max	--	0.03
Phosphorus	0.04 max	--	0.01
Sulfur	0.05 max	--	0.01

4. **CONDITION:** Aluminum killed, cold rolled, and oiled.

5. **TECHNICAL REQUIREMENTS:**

- 5.1 **Hardness:** 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, smooth, and free from foreign materials and from internal and external defects detrimental to fabrication or to performance of parts.

7. **TOLERANCES:** Unless otherwise specified, tolerances shall conform to the latest issue of AMS 2232 as applicable.

Section 7C of the SAE Technical Board rules provides that: "All technical reports, including standards approved and practices recommended, are advisory only. The use of any of the standards or practices recommended in this specification is entirely voluntary. The Board and its Committees will not investigate or consider any claims of infringement of patents or other rights of third parties. Prospective users of this report are responsible for protecting themselves against liability for infringement of patents."