

AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
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AMS 5040B

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STEEL SHEET AND STRIP Low Carbon - Deep 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.
3. COMPOSITION:

Check Analysis Under Min or Over Max

Carbon	0.15 max	- - -	0.03
Manganese	0.30 - 0.50	0.03	0.03
Phosphorous	0.040 max	- - -	0.01
Sulfur	0.050 max	- - -	0.01

4. CONDITION: (a) Cold rolled and oiled, conforming to a maximum hardness requirement of Rockwell B 55 or the equivalent. Acceptability of material less than 0.090 in. 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	Superficial Rockwell 15-T 73
Over 0.027 to 0.059 incl	Superficial Rockwell 30-T 53
Over 0.059 to 0.089 incl	Rockwell F 88

(b) 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.

5. 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. Material in which defects are revealed during fabrication will be subject to rejection.
6. TOLERANCES: Unless otherwise specified, tolerances shall conform to the latest issue of AMS 2232 as applicable. Thickness and width tolerances shall be as specified below:

- (a) Thickness - Table I
- (b) Width - Table III