

# AERONAUTICAL MATERIAL SPECIFICATION

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

## AMS 5132c

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### STEEL High Carbon

- 1. ACKNOWLEDGMENT:** A vendor shall mention this specification number and its revision letter in all quotations and when acknowledging purchase orders.
- 2. FORM:** Bars.
- 3. APPLICATION:** Primarily for dowels and other parts requiring close tolerances.
- 4. COMPOSITION:**

Check Analysis			
<u>Under</u> <u>Minor</u> <u>or</u> <u>Over</u> <u>Max</u>			

Carbon	0.90 - 1.30	0.04	0.04
Manganese	0.15 - 0.50	0.03	0.03
Silicon	0.35 max	--	0.02
Phosphorus	0.040 max	--	0.008
Sulfur	0.050 max	--	0.008

- 5. CONDITION:** Spheroidized annealed and cold finished; round bars shall be ground or polished.
- 6. TECHNICAL REQUIREMENTS:**

**6.1 Hardness:**

Nominal Diameter or Distance between parallel sides Inch	Hardness, max	
	<u>Brinell</u>	<u>Rockwell</u>
0.125 and under	302	C32
Over 0.125 to 0.250, incl	277	C29
Over 0.250 to 0.500, incl	241	C23
Over 0.500	207	B95

- 6.2 Decarburization:** Decarburization shall be absent unless steel is ordered to tolerances greater than those specified in Section 8 in which case the depth of decarburization shall be as agreed upon by purchaser and vendor.
- 6.3 Microstructure:** Shall show well spheroidized carbides, free from cementite network or excessive amounts of lamellar pearlite.
- 7. 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.

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