

AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
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AMS 5132B

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S T E E L 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:** Rods and bars.
3. **APPLICATION:** Primarily for dowels and other parts requiring the close tolerances specified.
4. **COMPOSITION:**

Check Analysis
Under Min. or Over Max.

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

5. **CONDITION:** Spheroidized annealed, cold finished and ground or polished, showing a microstructure of well spheroidized carbides, free from cementite network or excessive amounts of lamellar pearlite. Rods and bars shall conform to the following hardness requirements:

Nominal Diameter or Distance Between Parallel Sides - Inches	<u>Hardness, max</u>	
	Brinell	Rockwell
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. **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 between purchaser and vendor.
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. Material in which defects are revealed during fabrication will be subject to rejection.
8. **TOLERANCES:** Unless otherwise specified, tolerances shall conform to the following:

Nominal Diameter or Distance Between Parallel Sides - Inches	Tolerance, Inch Plus and Minus
.1249 and under	0.0002
Over .1249 to .4999, incl	0.00025
Over .4999 to 1.5000, incl	0.0005

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