



AEROSPACE MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
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AMS 5069A

Superseding AMS 5069

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STEEL BARS, FORGINGS, AND TUBING (0.15-0.20C) (SAE 1018)

1. **ACKNOWLEDGMENT:** A vendor shall mention this specification number and its revision letter in all quotations and when acknowledging purchase orders.
2. **FORM:** Bars, forgings, mechanical tubing, and forging stock.
3. **APPLICATION:** Primarily for miscellaneous parts, such as bushings, requiring no particular strength or hardness other than that inherent in low carbon steel of this type.
4. **COMPOSITION:**

	min	max
Carbon	0.15	- 0.20
Manganese	0.60	- 0.90
Silicon	0.15	- 0.30
Phosphorus	--	0.040
Sulfur	--	0.050

- 4.1 **Check Analysis:** Composition variations shall meet the requirements of the latest issue of AMS 2259, paragraph titled, "Carbon Steels, Bars, Forgings, and Forging Stock."
5. **CONDITION:** Unless otherwise ordered, the product shall be supplied in the following condition:
 - 5.1 **Bars:** Hot finished having hardness not higher than Brinell 229 or equivalent, except that bars ordered cold finished may have hardness as high as Brinell 241 or equivalent.
 - 5.2 **Forgings:** As ordered.
 - 5.3 **Mechanical Tubing:** Cold finished having hardness not higher than Brinell 241 or equivalent.
 - 5.4 **Forging Stock:** As ordered by the forging manufacturer.
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 following:
 - 7.1 **Bars:** The latest issue of AMS 2231.
 - 7.2 **Mechanical Tubing:** The latest issue of AMS 2253.

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