



AEROSPACE MATERIAL SPECIFICATION

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AMS 5082A

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STEEL TUBING, SEAMLESS 0.31 - 0.38C (SAE 1035)

1. **ACKNOWLEDGMENT:** A vendor shall mention this specification number and its revision letter in all quotations and when acknowledging purchase order.
2. **APPLICATION:** Primarily for parts requiring a material of moderate strength.
3. **COMPOSITION:**

	min	max
Carbon	0.31	0.38
Manganese	0.60	0.90
Silicon	0.15	0.30
Phosphorus	--	0.040
Sulfur	--	0.050

- 3.1 **Check Analysis:** Composition variations shall meet the requirements of the latest issue of AMS 2259, paragraph titled "Carbon Steels, Seamless Tubing."

4. **CONDITION:** Unless otherwise ordered, tubing shall be supplied cold drawn and stress relieved, having a uniform, fine grain in all parts of the tubing.

5. **TECHNICAL REQUIREMENTS:**

- 5.1 **Tensile Properties:** Tubing having OD not over 1.5 in. with wall thickness not over 0.125 in. shall conform to the following requirements:

Tensile Strength, psi	90,000 min
Yield Strength at 0.2% Offset or at 0.0087 in.	
in 2 in. Extension Under Load, (E = 30,000,000), psi	70,000 min
Elongation, % in 2 in.	
Nominal OD up to 0.500 in., incl, with wall thickness up to 0.035 in., inclusive	8 min
Nominal OD over 0.500 in. with wall thickness over 0.035 in.	10 min

- 5.1.1 Tubing with dimensions not shown in 5.1 shall have tensile properties as agreed upon by purchaser and vendor.

- 5.2 **Tensile Properties:** When so ordered, tubing shall be supplied having the following tensile properties:

Tensile Strength, psi	105,000 min
Yield Strength at 0.2% Offset or at 0.0097 in.	
in 2 in. Extension Under Load, (E = 30,000,000), psi	85,000 min
Elongation, % in 2 in.	8 min

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