



AEROSPACE MATERIAL

Society of Automotive Engineers, Inc.
TWO PENNSYLVANIA PLAZA, NEW YORK, N.Y. 1000

SPECIFICATION

AMS 5075B

Superseding AMS 5075A

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STEEL TUBING, SEAMLESS 0.22 - 0.28C (SAE 1025)

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 parts requiring a material of moderate ductility.

3. COMPOSITION:

	min	max
Carbon	0.22 - 0.28	
Manganese	0.30 - 0.60	
Silicon	0.10 - 0.35	
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: Cold drawn, and stress relieved if necessary, having a uniform fine grain in all parts of the tubing.

5. TECHNICAL REQUIREMENTS:

5.1 Tensile Properties:

Tensile Strength, psi	55,000 min
Yield Strength at 0.2% Offset or at 0.0064 in.	
in 2 in. Extension Under Load, (E = 30,000,000), psi	36,000 min
Elongation, % in 2 in.	22 min

5.1.1 For each 2000 psi in excess of 55,000 psi tensile strength, a reduction in elongation of 1%, to a minimum elongation of 10%, shall be allowed.

5.2 Tensile Properties, Normalized: The tubing shall be capable of developing the tensile properties specified in 5.1 when normalized by heating to 1625 F $\pm$ 10 (885 C $\pm$ 5.6) followed by cooling in still air.

6. QUALITY: Tubing shall be uniform in quality and condition and shall have a good workmanlike finish conforming to the best practice for high quality material. It shall be smooth, clean, and free from heavy scale or oxide, burrs, seams, tears, grooves, lamination, slivers, pits, and other injurious conditions. Surface imperfections such as handling marks, straightening marks, light mandrel and die marks, shallow pits, and scale pattern will not be considered injurious if the imperfections are removable within the tolerances specified for diameter and wall thickness. The removal of surface imperfections is not required.

7. TOLERANCES: Unless otherwise specified, tolerances shall conform to all applicable requirements of the latest issue of AMS 2253.