



Product Information

ASTM B521: Properties for Seamless and Welded Tantalum Tubes



ASTM B521: Mechanical Properties for Seamless and Welded Tubes

	R05200/R05400	R05252	R05255	R05240
Ultimate Tensile Strength, min. psi (MPa)	30,000 (207)	40,000 (276)	70,000 (481)	40,000 (226)
Yield Strength, 0.2% offset, min. psi (MPa)	20,000 (138)	28,000 (193)	60,000 (414)	28,000 (193)
Elongation, min. %, 1 or 2 inches (25 or 51 mm)	25	20	15	20

ASTM B521: Permissible Variations in Outside Dimensions for Seamless and Welded Tubes

Outside inches (mm)	Diameter Tolerance* Plus or Minus inches (mm)	Permissible Variations** in Wall Thickness, %
Under 1 (25.4), excl.	0.004 (0.102)	10
1 to 1.5 (25.4 to 38.1), excl.	0.005 (0.127)	10

* Permissible variations in outside diameter apply only to tubes as finished at the mill before subsequent swagging, expanding, bending, polishing or other fabricating operation. Ovality is the maximum and minimum outside diameter of a tube measured at any one cross section. If the measurement is made with a ring gauge, the following formula shall apply: Ovality = (specified OD tube + diameter tolerance +0.002 inches length of ring gauge, 1 inch) x nominal diameter.

** When wall tubes are ordered, tolerances are all plus and shall be double the values shown.

ASTM B521: Straightness of Seamless and Welded Tubes

Welded Tubes Length, ft. (m)	Maximum Curvature Depth of Arc
3 to 6 (0.91 to 1.83), incl.	1/8 inch (3.2 mm)
6 to 8 (1.83 to 2.44), incl.	3/16 inch (4.8 mm)
8 to 10 (2.44 to 3.05), incl.	1/4 inch (6.4 mm)
Over 10 (3.05)	1/4 inch/any 10 ft (2.1 mm/m)

Cabot Supermetals

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