

Technical Data Sheet

Product Name: Tantalum Wire
Catalog No.: TA0006
Standard: ASTM B365; ASTM F560
Size: Customized
Color: Grey
Grade: UNS R05200, UNS R05400



Specification

Form	Dia. (mm)	Tolerance (mm)	Standard	Purity
Wire	0.1-4	Dia. 0.10-0.15, Tol. ± 0.005	ASTM B365; ASTM F560	$\geq 99.99\%$
		Dia. 0.15-0.30, Tol. ± 0.006		
		Dia. >0.30 , Tol. ± 0.007		

Chemical Composition (% , Max.)

Element	C	O	N	H	Fe	Mo	Nb	Ni	Si	Ti	W	Ta
R05200	0.01	0.015	0.01	0.0015	0.01	0.02	0.1	0.01	0.005	0.01	0.05	Remainder
R05400	0.01	0.03	0.01	0.0015	0.01	0.02	0.1	0.01	0.005	0.01	0.05	Remainder

Properties

Properties	Unit	Value
Density	g/cm ³	16.6
Melting Point	°C	2,996
Boiling Point	°C	5,430
Tensile Strength	psi	35,000-70,000
Young's Modulus of Elasticity	lb/in ²	27×10^6
Poisson's Ratio	-	0.35
Linear Coefficient of Expansion	per °C	6.5×10^{-6}
Thermal Conductivity	W/m·K	57.5
Thermal Expansion	$\mu\text{m/m}\cdot\text{K}$	6.3
Vickers Hardness	MPA	870-1200
Specific Heat at 20°C	cal/g/°C	0.036
Electrical Conductivity	IACS	13%
Electrical Resistivity at 20°C	nΩ·m	135.0
Recrystallization Temperature	°C	1200-1400
Stress Relieving Temperature	°C	850

Stanford Advanced Materials

By.....*Norman*.....