

Technical Data Sheet

Product Name: Tantalum Niobium Wire
Catalog No.: TA0021
Standard: ASTM B365
Size: Customized
Color: Grey
Grade UNS R05240



Specification

Form	Dia. (inch)	Standard	Purity
Wire	0.01 to 0.124	ASTM B365	≥99.95% 99.9%

Chemical Composition (% , Max.)

Element	C	O	N	H	Fe	Mo	Nb	Ni	Si	Ti	W	Ta
R05240	0.01	0.02	0.01	0.0015	0.01	0.02	35.0-42.0	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 x 10 ⁶
Poisson's Ratio	-	0.35
Linear Coefficient of Expansion	per °C	6.5 x 10 ⁻⁶
Thermal Conductivity	W/m·K	57.5
Thermal Expansion	μm/m·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

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By..... *Norman*