

ATI Wah Chang Niobium

Category : Metal , Nonferrous Metal , Pure Element

Material Notes:

Niobium is a soft, ductile metal which can be cold worked over 90 percent before annealing becomes necessary. In appearance, the metal is somewhat similar to stainless steel. The density of 8.57 gm/cc is moderate compared to the majority of the high melting point metals, being less than molybdenum at 10.2 gm/cc and only half that of tantalum at 16.6 gm/cc. Information provided by ATI Wah Chang

Order this product through the following link:

http://www.lookpolymers.com/polymer_ATI-Wah-Chang-Niobium.php

Physical Properties	Metric	English	Comments
Density	8.58 g/cc	0.310 lb/in ³	
a Lattice Constant	3.30 Å	3.30 Å	

Mechanical Properties	Metric	English	Comments
Hardness, Vickers	60 - 100	60 - 100	
Modulus of Elasticity	103 GPa	14900 ksi	
Poissons Ratio	0.38	0.38	
Shear Modulus	37.3 GPa	5410 ksi	Calculated

Thermal Properties	Metric	English	Comments
CTE, linear	7.10 µm/m-°C	3.94 µin/in-°F	
	@Temperature 20.0 °C	@Temperature 68.0 °F	
Specific Heat Capacity	0.320 J/g-°C	0.0765 BTU/lb-°F	
	@Temperature 1227 °C	@Temperature 2241 °F	
Thermal Conductivity	52.22 W/m-K	362.4 BTU-in/hr-ft ² -°F	
	@Temperature 0.000 °C	@Temperature 32.0 °F	
Melting Point	68.92 W/m-K	478.3 BTU-in/hr-ft ² -°F	
	@Temperature 1600 °C	@Temperature 2910 °F	
Melting Point	2468 °C	4474 °F	
Boiling Point	4927 °C	8901 °F	
Brittleness Temperature	-150 °C	-238 °F	

Electrical Properties	Metric	English	Comments
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Electrical Properties	Metric	English	Comments
	0.2557150 ohm-cm	0.2557150 ohm-cm	

Chemical Properties	Metric	English	Comments
Covalent Radius	1.34	1.34	
Electronegativity	1.6	1.6	Pauling`s

Processing Properties	Metric	English	Comments
Recrystallization Temperature	900 - 1300 °C	1650 - 2370 °F	

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