

ATI Wah Chang Zirconium Alloy Zircaloy-4

Category : Metal , Nonferrous Metal , Zirconium Alloy

Material Notes:

Zirconium resists corrosive attack in most organic and mineral acids, strong alkalis, and some molten salts. A tightly adherent and protective oxide film protects the metal-oxide interface to provide corrosion resistance. An additional benefit for zirconium alloys in long-term geological disposal options is the inert nature of zirconium oxide. Information provided by ATI Wah Chang

Order this product through the following link:

http://www.lookpolymers.com/polymer_ATI-Wah-Chang-Zirconium-Alloy-Zircaloy-4.php

Physical Properties	Metric	English	Comments
Density	6.56 g/cc	0.237 lb/in ³	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell B	89	89	
Tensile Strength, Ultimate	241 MPa	34900 psi	Transverse
	@Temperature 288 °C	@Temperature 550 °F	
	271 MPa	39300 psi	Longitudinal
	@Temperature 288 °C	@Temperature 550 °F	
	514 MPa	74600 psi	
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	541 MPa	78400 psi	
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Tensile Strength, Yield	152 MPa	22000 psi	Longitudinal
	@Temperature 288 °C	@Temperature 550 °F	
	177 MPa	25600 psi	Transverse
	@Temperature 288 °C	@Temperature 550 °F	
	381 MPa	55200 psi	
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	467 MPa	67800 psi	
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Modulus of Elasticity	99.3 GPa	14400 ksi	
Poissons Ratio	0.37	0.37	

Shear Modulus Mechanical Properties	36.19 GPa Metric	5249 ksi English	Comments
--	---------------------	---------------------	----------

Thermal Properties	Metric	English	Comments
CTE, linear	6.00 $\mu\text{m}/\text{m}\cdot\text{°C}$	3.33 $\mu\text{in}/\text{in}\cdot\text{°F}$	
	@Temperature 20.0 °C	@Temperature 68.0 °F	
Thermal Conductivity	21.5 W/m-K	149 BTU-in/hr-ft ² -°F	
Melting Point	1850 °C	3360 °F	

Component Elements Properties	Metric	English	Comments
Chromium, Cr	0.070 - 0.13 %	0.070 - 0.13 %	
Fe + Cr	0.28 - 0.37 %	0.28 - 0.37 %	
Iron, Fe	0.18 - 0.24 %	0.18 - 0.24 %	
Tin, Sn	1.2 - 1.7 %	1.2 - 1.7 %	
Zirconium, Zr	97.56 - 98.27 %	97.56 - 98.27 %	

Descriptive Properties	Value	Comments
Alpha + Beta -> Beta Phase Transformation	980°C	
Alpha -> Alpha + Beta Phase Transformation	810°C	

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China