

ATI Wah Chang Zircadyne® Alloy Zr 702

Category : Metal , Nonferrous Metal , Zirconium Alloy

Material Notes:

Zircadyne 702 is commercially pure zirconium. Alloy exhibits good ductility even at cryogenic temperatures and good strength comparable with other common engineering alloys. Information provided by ATI Wah Chang

Order this product through the following link:

http://www.lookpolymers.com/polymer_ATI-Wah-Chang-Zircadyne-Alloy-Zr-702.php

Physical Properties	Metric	English	Comments
Density	6.50 g/cc	0.235 lb/in ³	
Vapor Pressure	1.20 bar @Temperature 3600 °C	900 torr @Temperature 6510 °F	

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	157 MPa	22700 psi	
	@Temperature 371 °C	@Temperature 700 °F	
	198 MPa	28700 psi	
	@Temperature 316 °C	@Temperature 601 °F	
	201 MPa	29100 psi	
	@Temperature 260 °C	@Temperature 500 °F	
	230 MPa	33300 psi	
	@Temperature 204 °C	@Temperature 399 °F	
Tensile Strength, Yield	305 MPa	44200 psi	
	@Temperature 149 °C	@Temperature 300 °F	
	364 MPa	52800 psi	
	@Temperature 93.0 °C	@Temperature 199 °F	
	468 MPa	67900 psi	
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	82.0 MPa	11900 psi	
	@Temperature 371 °C	@Temperature 700 °F	
	97.2 MPa	14100 psi	
	@Temperature 316 °C	@Temperature 601 °F	
	129 MPa	18700 psi	

Mechanical Properties	Metric @ Temperature 260 °C	English @ Temperature 500 °F	Comments
	139 MPa	20200 psi	
	@Temperature 204 °C	@Temperature 399 °F	
	196 MPa	28400 psi	
	@Temperature 149 °C	@Temperature 300 °F	
	268 MPa	38800 psi	
	@Temperature 93.0 °C	@Temperature 199 °F	
	321 MPa	46600 psi	
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Elongation at Break	28.9 %	28.9 %	
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	31.5 %	31.5 %	
	@Temperature 93.0 °C	@Temperature 199 °F	
	40.1 %	40.1 %	
	@Temperature 316 °C	@Temperature 601 °F	
	42.5 %	42.5 %	
	@Temperature 149 °C	@Temperature 300 °F	
	44.1 %	44.1 %	
	@Temperature 371 °C	@Temperature 700 °F	
	49 %	49 %	
	@Temperature 204 °C	@Temperature 399 °F	
	49 %	49 %	
	@Temperature 260 °C	@Temperature 500 °F	
Modulus of Elasticity	64.1 GPa	9300 ksi	
	@Temperature 371 °C	@Temperature 700 °F	
	69.6 GPa	10100 ksi	
	@Temperature 316 °C	@Temperature 601 °F	
	75.2 GPa	10900 ksi	
	@Temperature 260 °C	@Temperature 500 °F	
	80.7 GPa	11700 ksi	
	@Temperature 204 °C	@Temperature 399 °F	

Mechanical Properties	Metric	English	Comments
	86.9 GPa	12500 ksi	
	@Temperature 149 °C	@Temperature 300 °F	
	93.1 GPa	13500 ksi	
	@Temperature 93.0 °C	@Temperature 199 °F	
	98.6 GPa	14300 ksi	
	@Temperature 38.0 °C	@Temperature 100 °F	
	99.2 GPa	14400 ksi	
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Poissons Ratio	0.35	0.35	
Shear Modulus	36.2 GPa	5250 ksi	
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
Heat of Fusion	252.7 J/g	108.7 BTU/lb	Latent
Heat of Vaporization	6490 J/g	2790 BTU/lb	Latent
CTE, linear	6.30 µm/m-°C	3.50 µin/in-°F	
	@Temperature 149 °C	@Temperature 300 °F	
	7.02 µm/m-°C	3.90 µin/in-°F	
	@Temperature 260 °C	@Temperature 500 °F	
	7.38 µm/m-°C	4.10 µin/in-°F	
	@Temperature 371 °C	@Temperature 700 °F	
Melting Point	1852 °C	3366 °F	

Component Elements Properties	Metric	English	Comments
Fe + Cr	<= 0.20 %	<= 0.20 %	
Hafnium, Hf	<= 4.5 %	<= 4.5 %	
Zirconium, Zr	>= 94.7 %	>= 94.7 %	

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