Plansee TZM Titanium-Zirconium-Molybdenum

Category : Metal , Nonferrous Metal , Molybdenum Alloy

Material Notes:

Molybdenum is alloyed with Titanium and Zirconium and is doped with extremely fine carbides to create TZM.Characteristics:Higher strength than pure MoHigher recrystallization temperature than pure MoGreater creep resistance than pure MoApplications:Forging toolsRotating anodes in X-ray tubesOther high temperature/high load applicationsInformation provided by Plansee.

Order this product through the following link:
http://www.lookpolymers.com/polymer_Plansee-TZM-Titanium-Zirconium-Molybdenum.php

Physical Properties	Metric	English	Comments
Specific Gravity	10.2 g/cc	10.2 g/cc	Calculated

Thermal Properties	Metric	English	Comments
Maximum Service Temperature, Air	<= 1400 °C	<= 2550 °F	

Component Elements Properties	Metric	English	Comments
Carbon, C	0.010 - 0.040 %	0.010 - 0.040 %	
Molybdenum, Mo	99.38 - 99.41 %	99.38 - 99.41 %	Balance
Titanium, Ti	0.50 %	0.50 %	
Zirconium, Zr	0.080 %	0.080 %	

Processing Properties	Metric	English	Comments
Recrystallization Temperature	1400 °C	2550 °F	Deformation level - 90%

Descriptive Properties	Value	Comments
Creep Resistance	> 1400°C	greater than pure Mo
Ductility	greater than pure Mo	after HT use
Stability at High Temperature	< 1400°C	much greater than pure Mo
Stability at Room Temperature	greater than pure Mo	
Thermal Conductivity	Less than pure Mo (142 W/m-K)	
Weldability	greater than pure Mo	

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