Carpenter AerMet® 310

Category : Metal , Ferrous Metal , Alloy Steel , Tool Steel

Material Notes:

AerMet 310 alloy possesses higher hardness and strength than AerMet 100 alloy while maintaining exceptional ductility and toughness. At a 310 ksi (2137 MPa) ultimate tensile strength, AerMet 310 alloy exhibits toughness values equivalent to alloys 20 ksi (138 MPa) lower in strength. The alloy should be considered as a candidate for use in components requiring high strength, high fracture toughness and exceptional resistance to stress corrosion cracking and fatigue.

Order this product through the following link:
http://www.lookpolymers.com/polymer_Carpenter-AerMet-310.php

Physical Properties	Metric	English	Comments
Density	7.97 g/cc	0.288 lb/in³	

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	2170 MPa	315000 psi	
Tensile Strength, Yield	1900 MPa	275000 psi	
Elongation at Break	14.5 %	14.5 %	
Reduction of Area	63 %	63 %	
Tensile Modulus	192 GPa	27900 ksi	
Fatigue Strength	1030 MPa @# of Cycles 1.00e+7	150000 psi @# of Cycles 1.00e+7	R=-1, Kt=1
Fracture Toughness	71.42 MPa-m½	65.00 ksi-in½	
Charpy Impact	27.1 J	20.0 ft-lb	notched

Component Elements Properties	Metric	English	Comments
Carbon, C	0.25 %	0.25 %	
Chromium, Cr	2.4 %	2.4 %	
Cobalt, Co	15 %	15 %	
Iron, Fe	69.95 %	69.95 %	
Molybdenum, Mo	1.4 %	1.4 %	
Nickel, Ni	11 %	11 %	

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