

Carpenter AerMet® 100 Aged at 875°F

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

Material Notes:

An alloy providing high hardness and strength combined with exceptional ductility and toughness. This alloy should be considered for aircraft and aerospace structural components requiring high strength, high fracture toughness and exceptional stress corrosion cracking resistance. AerMet 100 may be considered for use up to about 800°F (427°C). This alloy is not subject to the same restrictions as AF1410, thus may be considered a substitute. UNS K92580

Order this product through the following link:

http://www.lookpolymers.com/polymer_Carpenter-AerMet-100-Aged-at-875F.php

Physical Properties	Metric	English	Comments
Density	7.89 g/cc	0.285 lb/in ³	

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	2080 MPa	302000 psi	
Tensile Strength, Yield	1780 MPa	258000 psi	
Elongation at Break	14.2 %	14.2 %	
Reduction of Area	63.8 %	63.8 %	
Tensile Modulus	192 GPa	27900 ksi	
Fatigue Strength	945 MPa @# of Cycles 1.00e+7	137000 psi @# of Cycles 1.00e+7	R=-1, Kt=1
Fracture Toughness	108.5 MPa-m ^{1/2}	98.70 ksi-in ^{1/2}	
Charpy Impact	40.7 J	30.0 ft-lb	notched

Component Elements Properties	Metric	English	Comments
Carbon, C	0.23 %	0.23 %	
Chromium, Cr	3.1 %	3.1 %	
Cobalt, Co	13.4 %	13.4 %	
Iron, Fe	70.97 %	70.97 %	
Molybdenum, Mo	1.2 %	1.2 %	
Nickel, Ni	11.1 %	11.1 %	

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