

Carpenter AerMet® 100 Aged at 900°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-900F.php

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

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	1980 MPa	287000 psi	
Tensile Strength, Yield	1700 MPa	246000 psi	
Elongation at Break	16.1 %	16.1 %	
Reduction of Area	67.3 %	67.3 %	
Tensile Modulus	194 GPa	28200 ksi	
Fatigue Strength	945 MPa @# of Cycles 1.00e+7	137000 psi @# of Cycles 1.00e+7	R=-1, Kt=1
Fracture Toughness	131.9 MPa-m ^{1/2}	120.0 ksi-in ^{1/2}	
Charpy Impact	47.5 J	35.0 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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