AK Steel PH 15-7 Mo® Precipitation Hardening Stainless Steel, Condition C

Category : Metal , Ferrous Metal , Martensitic , Stainless Steel , Precipitation Hardening Stainless

Material Notes:

AK Steel 15-7 Mo® provides high strength and hardness, good corrosion resistance and minimum distortion on heat treatment. It is easily formed in the annealed condition and develops effective balance of properties by simple heat treatment. This alloy is useful for a wide range of applications that include retaining rings, springs, diaphragms, aircraft bulkheads, welded and brazed honeycomb paneling and other aircraft components requiring high strength at elevated temperatures. The material supplied from the mill is in Condition A. After fabrication, and conditioning treatments, the material is precipitation hardened into either Condition TH 1050 or Condition RH 950. To achieve the highest mechanical properties Condition A material is transformed to martensite at the mill by cold reduction to Condition C. After fabrication by the user a single low-temperature heat treatment is preformed to achieve condition CH 900.Information provided by AK Steel

Order this product through the following link:
http://www.lookpolymers.com/polymer_AK-Steel-PH-15-7-Mo-Precipitation-Hardening-Stainless-Steel-Condition-C.php

Physical Properties	Metric	English	Comments
Density	7.70 g/cc	0.278 lb/in³	Typical

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell C	45	45	
Tensile Strength, Ultimate	1517 MPa	220000 psi	
Tensile Strength, Yield	1310 MPa @Strain 0.200 %	190000 psi @Strain 0.200 %	
Elongation at Break	5.0 %	5.0 %	in 2 inches
Modulus of Elasticity	200 GPa	29000 ksi	

Component Elements Properties	Metric	English	Comments
Aluminum, Al	0.75 - 1.5 %	0.75 - 1.5 %	
Carbon, C	<= 0.090 %	<= 0.090 %	
Chromium, Cr	14 - 16 %	14 - 16 %	
Iron, Fe	69.58 - 76.75 %	69.58 - 76.75 %	As Remainder
Manganese, Mn	<= 1.0 %	<= 1.0 %	
Molybdenum, Mo	2.0 - 3.0 %	2.0 - 3.0 %	
Nickel, Ni	6.5 - 7.75 %	6.5 - 7.75 %	

Component Elements Properties	Metric	English	Comments
Phosphorous, P	<= 0.040 %	<= 0.040 %	
Silicon, Si	<= 1.0 %	<= 1.0 %	
Sulfur, S	<= 0.040 %	<= 0.040 %	

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