

AK Steel 17-7 PH® Precipitation Hardening Stainless Steel, Condition A

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

Material Notes:

AK Steel 17-7 PH® provides high strength and hardness, excellent fatigue properties, good corrosion resistance, good formability, and minimum distortion upon heat treatment. This alloy provides valuable property combinations particularly well suited for aerospace applications. This special alloy also provides benefits for other applications requiring high strength and good corrosion resistance, as well as excellent properties for flat springs at temperatures up to 600°F (310°C). 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-17-7-PH-Precipitation-Hardening-Stainless-Steel-Condition-A.php

Physical Properties	Metric	English	Comments
Density	7.81 g/cc	0.282 lb/in ³	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell B	85	85	
Tensile Strength, Ultimate	896 MPa	130000 psi	
Tensile Strength, Yield	276 MPa @Strain 0.200 %	40000 psi @Strain 0.200 %	
Elongation at Break	35 %	35 %	in 2 inches
Modulus of Elasticity	200 GPa	29000 ksi	

Thermal Properties	Metric	English	Comments
CTE, linear	15.3 µm/m-°C @Temperature 21.0 - 93.0 °C	8.50 µin/in-°F @Temperature 69.8 - 199 °F	
	16.0 µm/m-°C @Temperature <=427 °C	8.89 µin/in-°F @Temperature <=801 °F	

Component Elements Properties	Metric	English	Comments
Aluminum, Al	0.75 - 1.5 %	0.75 - 1.5 %	

Carbon, C Component Elements Properties	$\leq 0.090\%$ Metric	$\leq 0.090\%$ English	Comments
Chromium, Cr	16 - 18 %	16 - 18 %	
Iron, Fe	70.59 - 76.75 %	70.59 - 76.75 %	As Remainder
Manganese, Mn	$\leq 1.0\%$	$\leq 1.0\%$	
Nickel, Ni	6.5 - 7.75 %	6.5 - 7.75 %	
Phosphorous, P	$\leq 0.040\%$	$\leq 0.040\%$	
Silicon, Si	$\leq 1.0\%$	$\leq 1.0\%$	
Sulfur, S	$\leq 0.030\%$	$\leq 0.030\%$	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.0000800 ohm-cm	0.0000800 ohm-cm	
Magnetic Permeability	1.4 - 3.2	1.4 - 3.2	200 oersteds
	1.4 - 3.6	1.4 - 3.6	maximum
	1.4 - 3.6	1.4 - 3.6	50 oersteds

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China