

## AK Steel 15-5 PH® Precipitation Hardening Stainless Steel, Condition H 900

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

### Material Notes:

AK Steel 15-5 PH® provides high strength, good corrosion resistance, good mechanical properties at temperatures up to 600°F (316°C), and good toughness in both base metal and welds. Short-time, low-temperature heat treatments minimize distortion and scaling. AK Steel 15-5 PH® is the ferrite-free version of AK Steel 17-4 PH® Stainless Steel. Both alloys are widely used in the aerospace, chemical, petrochemical, food processing, paper and general metalworking industries. The material supplied from the mill is in Condition A. After fabrication eight standard heat treatments have been developed to provide a wide range of properties. Information provided by AK Steel

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_AK-Steel-15-5-PH-Precipitation-Hardening-Stainless-Steel-Condition-H-900.php](http://www.lookpolymers.com/polymer_AK-Steel-15-5-PH-Precipitation-Hardening-Stainless-Steel-Condition-H-900.php)

Physical Properties	Metric	English	Comments
Density	7.80 g/cc	0.282 lb/in <sup>3</sup>	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell C	46	46	Longitudinal
	46	46	Transverse
Tensile Strength, Ultimate	1438 MPa	208600 psi	Longitudinal
	1466 MPa	212600 psi	Transverse
Tensile Strength, Yield	1385 MPa @Strain 0.200 %	200900 psi @Strain 0.200 %	Longitudinal
	1393 MPa @Strain 0.200 %	202000 psi @Strain 0.200 %	Transverse
Elongation at Break	9.4 %	9.4 %	in 2 inches, Transverse
	10.1 %	10.1 %	in 2 inches, Longitudinal

Thermal Properties	Metric	English	Comments
CTE, linear	10.8 µm/m-°C @Temperature 21.0 - 93.0 °C	6.00 µin/in-°F @Temperature 69.8 - 199 °F	
	11.7 µm/m-°C @Temperature <=427 °C	6.50 µin/in-°F @Temperature <=801 °F	
Thermal Conductivity	17.9 W/m-K	124 BTU-in/hr-ft <sup>2</sup> -°F	

Thermal Properties	@Temperature 149 °C Metric	@Temperature 300 °F English	Comments
	22.6 W/m-K	157 BTU-in/hr-ft <sup>2</sup> -°F	
	@Temperature 482 °C	@Temperature 900 °F	

Component Elements Properties	Metric	English	Comments
Carbon, C	<= 0.070 %	<= 0.070 %	
Chromium, Cr	14 - 15.5 %	14 - 15.5 %	
Copper, Cu	2.5 - 4.5 %	2.5 - 4.5 %	
Iron, Fe	71.91 - 79.85 %	71.91 - 79.85 %	As Remainder
Manganese, Mn	<= 1.0 %	<= 1.0 %	
Nb + Ta	0.15 - 0.45 %	0.15 - 0.45 %	
Nickel, Ni	3.5 - 5.5 %	3.5 - 5.5 %	
Phosphorous, P	<= 0.040 %	<= 0.040 %	
Silicon, Si	<= 1.0 %	<= 1.0 %	
Sulfur, S	<= 0.030 %	<= 0.030 %	

## Contact Songhan Plastic Technology Co.,Ltd.

Website : [www.lookpolymers.com](http://www.lookpolymers.com)

Email : [sales@lookpolymers.com](mailto:sales@lookpolymers.com)

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

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