

## AK Steel 305 Austenitic Stainless steel

Category : Metal , Ferrous Metal , Austenitic , Stainless Steel , T 300 Series Stainless Steel

### Material Notes:

AK Steel 305 can be spun and deep drawn more easily due to an increased nickel content that decreases work hardening. It is non-magnetic and cannot be hardened by heat treatment. Typical uses include appliances, kitchen utensils, tank covers and other deep drawn parts. Information provided by AK Steel

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_AK-Steel-305-Austenitic-Stainless-steel.php](http://www.lookpolymers.com/polymer_AK-Steel-305-Austenitic-Stainless-steel.php)

Physical Properties	Metric	English	Comments
Density	7.99 g/cc	0.289 lb/in <sup>3</sup>	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell B	80	80	Annealed
Tensile Strength, Ultimate	586 MPa	85000 psi	Annealed
Tensile Strength, Yield	262 MPa @Strain 0.200 %	38000 psi @Strain 0.200 %	Annealed
Elongation at Break	50 %	50 %	in 2 inches, Annealed
Modulus of Elasticity	193 GPa	28000 ksi	
Izod Impact	140 J	103 ft-lb	V-Notch (Annealed)

Thermal Properties	Metric	English	Comments
CTE, linear	17.3 $\mu\text{m}/\text{m}\cdot\text{°C}$	9.61 $\mu\text{in}/\text{in}\cdot\text{°F}$	
	@Temperature 0.000 - 100 °C	@Temperature 32.0 - 212 °F	
	18.7 $\mu\text{m}/\text{m}\cdot\text{°C}$	10.4 $\mu\text{in}/\text{in}\cdot\text{°F}$	
	@Temperature <=649 °C	@Temperature <=1200 °F	
Specific Heat Capacity	0.500 J/g-°C	0.120 BTU/lb-°F	
	@Temperature 0.000 - 100 °C	@Temperature 32.0 - 212 °F	
Thermal Conductivity	16.2 W/m-K	112 BTU-in/hr-ft <sup>2</sup> -°F	
	@Temperature 100 °C	@Temperature 212 °F	
	21.4 W/m-K	149 BTU-in/hr-ft <sup>2</sup> -°F	

Thermal Properties	@Temperature 500 °C Metric	@Temperature 932 °F English	Comments
Melting Point	1399 - 1454 °C	2550 - 2649 °F	
Solidus	1399 °C	2550 °F	
Liquidus	1454 °C	2649 °F	

Component Elements Properties	Metric	English	Comments
Carbon, C	<= 0.12 %	<= 0.12 %	
Chromium, Cr	17 - 19 %	17 - 19 %	
Iron, Fe	64.085 - 73 %	64.085 - 73 %	As Remainder
Manganese, Mn	<= 2.0 %	<= 2.0 %	
Nickel, Ni	10 - 13 %	10 - 13 %	
Phosphorous, P	<= 0.045 %	<= 0.045 %	
Silicon, Si	<= 1.0 %	<= 1.0 %	
Sulfur, S	<= 0.030 %	<= 0.030 %	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.0000720 ohm-cm	0.0000720 ohm-cm	
Magnetic Permeability	<= 1.02	<= 1.02	H = 200 Oersteds, Annealed

## Contact Songhan Plastic Technology Co.,Ltd.

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