

ATI Allegheny Ludlum AL 4565™ Corrosion Resistant Stainless Steel

Category : Metal , Ferrous Metal , Austenitic , Stainless Steel , T S30000 Series Stainless Steel

Material Notes:

Characteristics:Very high resistance to pitting and crevice corrosion Excellent general corrosion resistance in a variety of media Higher mechanical propertied then conventional stainless steels Good weldability and metallurgical stability Good resistance to stress corrosion crackingInformation provided by Allegheny Ludlum

Order this product through the following link:

http://www.lookpolymers.com/polymer_ATI-Allegheny-Ludlum-AL-4565-Corrosion-Resistant-Stainless-Steel.php

Physical Properties	Metric	English	Comments
Density	8.00 g/cc	0.289 lb/in ³	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell B	90	90	
Tensile Strength, Ultimate	903 MPa	131000 psi	
	630 MPa	91400 psi	
	@Temperature 300 °C	@Temperature 572 °F	
	725 MPa	105000 psi	
	@Temperature 100 °C	@Temperature 212 °F	
Tensile Strength, Yield	240 MPa	34800 psi	
	@Temperature 300 °C	@Temperature 572 °F	
	345 MPa	50000 psi	
	@Temperature 100 °C	@Temperature 212 °F	
	469 MPa	68000 psi	
	@Strain 0.200 %	@Strain 0.200 %	
Elongation at Break	47 %	47 %	
	45 %	45 %	
	@Temperature 100 °C	@Temperature 212 °F	
	45 %	45 %	
	@Temperature 300 °C	@Temperature 572 °F	
Modulus of Elasticity	195 GPa	28300 ksi	

Thermal Properties	Metric	English	Comments
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Thermal Properties	Metric $m/m-^{\circ}C$	English $in-in-^{\circ}F$	Comments
CTE, linear	@Temperature 20.0 - 100 $^{\circ}C$	@Temperature 68.0 - 212 $^{\circ}F$	
	17.3 $\mu m/m-^{\circ}C$	9.61 $\mu in/in-^{\circ}F$	
Specific Heat Capacity	@Temperature 20.0 - 500 $^{\circ}C$	@Temperature 68.0 - 932 $^{\circ}F$	
	0.450 J/g- $^{\circ}C$	0.108 BTU/lb- $^{\circ}F$	
	@Temperature 20.0 - 300 $^{\circ}C$	@Temperature 68.0 - 572 $^{\circ}F$	
Thermal Conductivity	0.550 J/g- $^{\circ}C$	0.131 BTU/lb- $^{\circ}F$	
	@Temperature 20.0 - 500 $^{\circ}C$	@Temperature 68.0 - 932 $^{\circ}F$	
	0.620 J/g- $^{\circ}C$	0.148 BTU/lb- $^{\circ}F$	
Thermal Conductivity	13.0 W/m-K	90.2 BTU-in/hr-ft $^2-^{\circ}F$	
	@Temperature 20.0 - 100 $^{\circ}C$	@Temperature 68.0 - 212 $^{\circ}F$	
	15.0 W/m-K	104 BTU-in/hr-ft $^2-^{\circ}F$	
	@Temperature 20.0 - 500 $^{\circ}C$	@Temperature 68.0 - 932 $^{\circ}F$	

Component Elements Properties	Metric	English	Comments
Carbon, C	0.010 %	0.010 %	
Chromium, Cr	24 %	24 %	
Iron, Fe	>= 48.04 %	>= 48.04 %	As Remainder
Manganese, Mn	6.0 %	6.0 %	
Molybdenum, Mo	4.5 %	4.5 %	
Nickel, Ni	17 %	17 %	
Nitrogen, N	0.45 %	0.45 %	

Electrical Properties	Metric	English	Comments
Volume Resistivity	0.000092 ohm-cm	0.000092 ohm-cm	

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