AK Steel 434 Ferritic Stainless steel

Category : Metal , Ferrous Metal , Ferritic , Stainless Steel , T 400 Series Stainless Steel

Material Notes:

AK Steel 434 is a modification of Type 430, the addition of molybdenum increases this alloy's corrosion resistance and its attack from many deicing chemicals. It also provides good heat and oxidation resistance up to 1500°F as well as good mechanical properties. AK Steel 434 is Ferro-magnetic.Information provided by AK Steel

Order this product through the following link:
http://www.lookpolymers.com/polymer_AK-Steel-434-Ferritic-Stainless-steel.php

Physical Properties	Metric	English	Comments
Density	7.74 g/cc	0.280 lb/in³	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell B	85	85	
Tensile Strength, Ultimate	483 MPa	70100 psi	
Tensile Strength, Yield	310 MPa @Strain 0.200 %	45000 psi @Strain 0.200 %	
Elongation at Break	25 %	25 %	in 2 inches
Modulus of Elasticity	200 GPa	29000 ksi	

Thermal Properties	Metric	English	Comments
CTE, linear	10.4 µm/m-°C @Temperature 0.000 - 100 °C	5.78 µin/in-°F @Temperature 32.0 - 212 °F	
	11.4 µm/m-°C @Temperature <=538 °C	6.33 µin/in-°F @Temperature <=1000 °F	
Specific Heat Capacity	0.460 J/g-°C @Temperature 0.000 - 100 °C	0.110 BTU/lb-°F @Temperature 32.0 - 212 °F	
Thermal Conductivity	26.1 W/m-K @Temperature 100 °C	181 BTU-in/hr-ft²-°F @Temperature 212 °F	
	26.3 W/m-K @Temperature 500 °C	183 BTU-in/hr-ft²-°F @Temperature 932 °F	
Melting Point			

Thermal Properties	Metric	English	Comments
	1482 - 1532 °C	2700 - 2790 °F	
Solidus	1482 °C	2700 °F	
Liquidus	1532 °C	2790 °F	

Component Elements Properties	Metric	English	Comments
Carbon, C	<= 0.080 %	<= 0.080 %	
Chromium, Cr	16 - 18 %	16 - 18 %	
Iron, Fe	>= 78.57 %	>= 78.57 %	As Remainder
Manganese, Mn	<= 1.0 %	<= 1.0 %	
Molybdenum, Mo	0.75 - 1.25 %	0.75 - 1.25 %	
Nickel, Ni	<= 0.50 %	<= 0.50 %	
Silicon, Si	<= 0.60 %	<= 0.60 %	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.0000600 ohm-cm	0.0000600 ohm-cm	

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