

AK Steel 444 Ferritic Stainless steel

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

Material Notes:

AK Steel 444 is a low-carbon, low nitrogen, ferritic stainless steel that provides pitting and crevice corrosion resistance superior to most ferritic stainless steels. Applications requiring superior corrosion resistance and resistance to chloride stress corrosion cracking are ideal for this alloy. Current uses include food processing, brewery and wine-making equipment; hot-water tanks and heat exchanger tubing and automotive components. Information provided by AK Steel

Order this product through the following link:

http://www.lookpolymers.com/polymer_AK-Steel-444-Ferritic-Stainless-steel.php

Physical Properties	Metric	English	Comments
Density	7.75 g/cc	0.280 lb/in ³	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell B	<= 90	<= 90	
Tensile Strength, Ultimate	>= 414 MPa	>= 60000 psi	
Tensile Strength, Yield	360 MPa @Strain 0.200 %	52200 psi @Strain 0.200 %	
Elongation at Break	>= 20 %	>= 20 %	in 2 inches

Thermal Properties	Metric	English	Comments
CTE, linear	11.0 $\mu\text{m}/\text{m}\cdot\text{°C}$ @Temperature 0.000 - 100 °C	6.11 $\mu\text{in}/\text{in}\cdot\text{°F}$ @Temperature 32.0 - 212 °F	
Specific Heat Capacity	0.427 J/g-°C @Temperature 0.000 - 100 °C	0.102 BTU/lb-°F @Temperature 32.0 - 212 °F	
Thermal Conductivity	26.8 W/m-K @Temperature 100 °C	186 BTU-in/hr-ft ² -°F @Temperature 212 °F	

Component Elements Properties	Metric	English	Comments
Carbon, C	<= 0.025 %	<= 0.025 %	
Chromium, Cr	17.5 - 19.5 %	17.5 - 19.5 %	
Iron, Fe	>= 74.105 %	>= 74.105 %	As Remainder

Manganese Mn Component Elements Properties	$\leq 1.0\%$ Metric	$\leq 1.0\%$ English	Comments
Molybdenum, Mo	1.75 - 2.5 %	1.75 - 2.5 %	
Nickel, Ni	$\leq 1.0\%$	$\leq 1.0\%$	
Other, total	0.20 - 0.80 %	0.20 - 0.80 %	
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	0.0000570 ohm-cm	0.0000570 ohm-cm	

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