

IBC Advanced Alloys FA230 Beryllium Nickel Casting Alloy

Category: Metal, Nonferrous Metal, Beryllium Alloy, Nickel Alloy

Material Notes:

Beryllium nickel casting alloys are characterized by their steel-like high strength, toughness, and hardness properties. However, unlike the steel alloys, the beryllium nickel alloy system offers these properties with the additional benefit of superior thermal conductivity. Beryllium nickel casting alloys are notable for their high resistance to wear, thermal shock, and corrosion even at elevated temperatures in the range of $1000 \hat{A}^{\circ}F$ ($540 \hat{A}^{\circ}C$). Information provided by IBC Advanced Alloys.

Order this product through the following link:

http://www.lookpolymers.com/polymer_IBC-Advanced-Alloys-FA230-Beryllium-Nickel-Casting-Alloy.php

Physical Properties	Metric	English	Comments
Density	8.25 g/cc	0.298 lb/in³	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell B	95 - 100	95 - 100	Annealed
Hardness, Rockwell C	46 - 52	46 - 52	Annealed and Aged
Tensile Strength, Ultimate	>= 1140 MPa	>= 165000 psi	Annealed and Aged
Tensile Strength, Yield	>= 1030 MPa	>= 150000 psi	Annealed and Aged

Thermal Properties	Metric	English	Comments
CTE, linear	14.4 Âμm/m-°C	8.00 Âμin/in-°F	
Melting Point	1200 - 1320 °C	2200 - 2400 °F	
Solidus	1200 °C	2200 °F	
Liquidus	1320 °C	2400 °F	

Component Elements Properties	Metric	English	Comments	
Beryllium, Be	2.3 - 2.4 %	2.3 - 2.4 %		
Carbon, C	<= 0.30 %	<= 0.30 %		
Nickel, Ni	97.3 - 97.7 %	97.3 - 97.7 %	As Balance	

Processing Properties	Metric	English	Comments
Solution Temperature	1040 - 1090 °C	1900 - 2000 °F	Solution Anneal, then Water Quench
Aging Temperature	510 °C	950 °F	3 Hours



Processing Properties Metric English Comments

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