

Wall Colmonoy COLMONOY® 57 PTA - Nickel-Base Hard-Surfacing Alloy

Category : Metal , Metal Matrix Composite , Nonferrous Metal , Nickel Alloy

Material Notes:

Description: Colmonoy 57 PTA is a unique Ni-Cr-B alloy containing optimized amounts of precipitated tungsten rich hard phases distributed throughout the matrix. These hard phases offer substantial increase in abrasion resistance and reduce the sensitivity of the material to hardness variations during deposition of overlays using PTA equipment. These hard phases are incorporated in the matrix material by careful alloying during the powder manufacturing process, as opposed to external additions in conventional composite powders. Applications: Colmonoy 57PTA is specifically formulated for overlaying the flights of new and rebuilt extrusion or injection molding screws. It exhibits excellent weldability and is easy for the operator to control. Laboratory tests have shown that variations in PTA deposition parameters have minimal effects on the hardness of the deposit. The alloy also has many other potential applications where resistance to abrasion and corrosion are important. Examples include applications in the food processing industry such as feed screws, air locks and scraper blades. Information provided by Wall Colmonoy Corporation.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Wall-Colmonoy-COLMONOY-57-PTA-Nickel-Base-Hard-Surfacing-Alloy.php

Physical Properties	Metric	English	Comments
Density	4.70 g/cc	0.170 lb/in ³	apparent
	8.50 g/cc	0.307 lb/in ³	theoretical

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell C	47	47	single pass
	52	52	double pass

Thermal Properties	Metric	English	Comments
Melting Point	971 - 1120 °C	1780 - 2050 °F	
Solidus	971 °C	1780 °F	
Liquidus	1120 °C	2050 °F	

Component Elements Properties	Metric	English	Comments
Boron, B	2.5 %	2.5 %	
Carbon, C	0.50 %	0.50 %	
Chromium, Cr	11.5 %	11.5 %	
Iron, Fe	3.5 %	3.5 %	
Nickel, Ni	62.5 %	62.5 %	As Balance

Component Elements Properties	Metric	English	Comments
Tungsten, W	16 %	16 %	

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