

## Wall Colmonoy COLMONOY® 80 PTA - Nickel-Base Hard Surfacing Composite Powder

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

### Material Notes:

Description: Colmonoy 80 PTA is a unique composite material containing a high volume percent of extremely abrasion resistant tungsten carbide particles (3500 DPH) in a soft (HRC 30) impact resistant nickel-base matrix alloy. The hard tungsten carbide particles provide abrasion resistance whereas the soft nickel matrix provides excellent ductility and impact resistance. The nickel alloy matrix and the tungsten carbide particles are uniquely matched so that a high volume percent of carbide grains are uniformly distributed throughout the matrix alloy. Applications: Colmonoy 80PTA is specifically designed for PTA overlays that require a combination of high impact resistance and abrasion resistance. Typical applications include mining and drilling equipment, impact hammers, earthmoving and aggregate processing equipment and die plates. The nickel-base matrix alloy is specifically chosen to be soft (HRC30) and ductile to resist cracking under impact conditions. A high volume of carbide particles uniformly distributed in the matrix provides excellent abrasion resistance. Colmonoy 80PTA is not recommended for applications where the abrasive particles are extremely fine (less than 5 microns) or in a slurry form. Information provided by Wall Colmonoy Corporation.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Wall-Colmonoy-COLMONOY-80-PTA-Nickel-Base-Hard-Surfacing-Composite-Powder.php](http://www.lookpolymers.com/polymer_Wall-Colmonoy-COLMONOY-80-PTA-Nickel-Base-Hard-Surfacing-Composite-Powder.php)

Physical Properties	Metric	English	Comments
Density	5.80 g/cc	0.210 lb/in <sup>3</sup>	apparent
	12.8 g/cc	0.462 lb/in <sup>3</sup>	theoretical

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell C	40	40	single pass
	48	48	double pass

Thermal Properties	Metric	English	Comments
Melting Point	993 - 1230 °C	1820 - 2240 °F	
Solidus	993 °C	1820 °F	
Liquidus	1230 °C	2240 °F	

Component Elements Properties	Metric	English	Comments
Boron, B	0.40 %	0.40 %	
Carbon, C	3.8 %	3.8 %	
Chromium, Cr	2.3 %	2.3 %	
Iron, Fe			

Component Elements Properties	0.60 % Metric	0.60 % English	Comments
Nickel, Ni	35.3 %	35.3 %	As Balance
Silicon, Si	1.6 %	1.6 %	
Tungsten, W	56 %	56 %	

## Contact Songhan Plastic Technology Co.,Ltd.

Website : [www.lookpolymers.com](http://www.lookpolymers.com)

Email : [sales@lookpolymers.com](mailto:sales@lookpolymers.com)

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215, Fengxian District, Shanghai City, China