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PRODUCT DATA SHEET

Weartech Wearcar (NiCrBWC) Powders

Description:

The Wearcar hardfacing powders are composed of NiCrBSi powder blended with tungsten carbide fragments particles. Upon welding, the NiCrSiB serves as an alloy matrix that stabilizes the crushed or spherical WC particles. The result is a durable weld deposit that is resilient in high temperatures and exceptionally resistant to corrosion and wear.

Applications:

- Oil Drilling downhole equipment
- Dredging & Mining Equipment
- Wear Pads
- Feed/Extrusion Screws
- Centrifuge parts
- Earth Boring Tools
- Mixers
- Rendering
- Stabilizers
- Pump parts
- Wear Rings
- Rock Bits

Typical Matrix Chemistry (wt%)							
Alloy	Ni	Cr	Si	B	Fe	C	Rc
WT-40	Bal	11	2.2	2	2	0.4	35-45
WT-50	Bal	13	3.7	3	4	0.6	45-56
WT-60	Bal	15	4	3.5	4.5	0.7	54-62

Deposit Properties:

When surfacing, the matrix (NiCrSiB powder) fuses with the tungsten carbide particles like a brazing, forming a dense coating on and durable bond with the base material.

Welding Process:

Material can be deposited by Spray & Fuse, Manual Torch or PTA process

Typical Hardness:

The NiCrBSi matrix hardness of this alloy is typically between Rc 35-62 depending on the matrix alloy
 The tungsten carbide particles have a typical hardness between 2500-3500 DPH
 The deposits contain up to 65% tungsten carbide (WC) , depending on the blend

Product Numbering

The Wearcar alloy product composition consist of 4 digit numbers, whereas the first two digits indicate the matrix alloy and the second two indicate the percentage of WC.

Examples

- P4065 65% WC with 35% WT-40
- P5035 35% WC with 65% WT-50
- P6050 50% WC with 50% WT-60

Hardfacing Finishing:

Deposits of this alloy can only be finished by grinding. Machining is not recommended.