



## TECHNICAL DATA SHEET

**Diamond Carbide 60 Grade Powder - Nickel Based Alloys**  
 Blended Carbide Composite Hardfacing Powder  
*Hard Surfacing Maintenance and Repair*  
*Maximum Resistance to Low Impact and Extreme Wear*

DC60 Grade hardfacing powders are a special blend of 40% nickel, chromium, boron alloy matrix and 60% finely powdered macro-crystalline tungsten carbide (MAC). Nickel, chromium, boron alloy offers excellent resistance to the effects of corrosion, erosion, high temp oxidation, abrasion, grinding wear. The addition of MAC toughens the matrix, bringing its wear resistance to excellent, for extreme abrasion conditions with low impact requirements. Reviews of microstructures exhibit dense deposits of undissolved tungsten carbides embedded in a high strength matrix.

The low melting point (1900°F) of nickel, chromium, boron enables overlays to be applied with minimal dilution and base metal distortion. Alloy is self-fluxing and easily applied by OAW (Oxyacetylene) Spray Fuse, on clean base metals.

Alloy can be applied to most base metals, cast irons, steels, stainless steels, nickel and cobalt alloys and others, thereby eliminating a confusing selection process.

### Applications

Drill Bits, mining tools, agricultural tillage tools, screw conveyors, augers and any application that requires resistance to extreme metal wear, and low impact resistance.

Matrix	Rockwell "C" Scale	Nominal Chemistry		Melting Temperature
VERSAAlloy® 60 AWS A5.13 NiCr-C	57-61	C 0.74 Cr 14.00 Si 4.55	B 3.5 Fe 4.5 Ni Bal	1900°F

### Welding Techniques and Procedures

**\*In all cases, minimum dilution processes are recommended to obtain maximum wear resistance. The surface to be hardfaced should be clean of grease, oil, rust and other contaminants by grinding the base metal.\***

Fusewelder - The Fusewelder® Torch is a special oxy-acetylene torch which preheats the base metal, sprays powdered alloys and fuses deposits to the workpiece – all with one integrated unit.

*Call Rankin PMA at (800) 854-2159 for more information.*



Toll-free: 800.854.2159  
 P: 909.483.3222  
 F: 909.483.3233  
[www.Broco-Rankin.com](http://www.Broco-Rankin.com)