



TECHNICAL DATA SHEET

Diamond Carbide 50 V Grade - Nickel Based Alloys Blended Carbide Composite Hardfacing Rod *Hard Surfacing Maintenance and Repair* *Maximum Resistance to Good Impact and Severe Abrasion*

DC50 V Grade hardfacing rods are a special blend of nickel, chromium, boron alloy matrix, and sintered tungsten carbide (SWC). Nickel alloy offers excellent resistance to the effects of corrosion, erosion, and high temp oxidation, abrasion wear and impact. SWC's wear resistance characteristics are excellent, significantly increasing part life, while assisting in gripping / cutting actions.

The low melting point (1950°F) of nickel, chromium, boron enables overlays to be applied with minimal dilution and base metal distortion. Alloy is self-fluxing and is easily applied by OAW (Oxyacetylene), GTAW (Tig), SMAW (Coated Electrodes), 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.

Unique sintered powder metallurgy process allows for manufacture of diameter rods from 5/16" (.3125") down to 3/16" (.1875") diameter.

Applications

Pulp knives, ensilage cutter bars, rollers/crushers and any agricultural application that resists severe metal to earth abrasion, requiring good impact resistance.

Matrix	Rockwell "C" Scale	Nominal Chemistry		Melting Temperature
VERSAlloy® 50 AWS A5.13 NiCr-B	48-52	C 0.6 Cr 11.0 Si 4.0	B 3.0 Fe 4.0 Ni Bal	1950°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.

OAW (Oxyacetylene) – Use a neutral flame (2 to 3 x "feather"), preheat base metal and bring to a "red" heat at the starting point of your weld, rods will then flow freely when introduced into the torch flame.

GTAW (TIG)- Use DC electrode negative (straight polarity) with largest Tungsten electrode possible to minimum tungsten contamination of the weld puddle.

SMAW (Coated Electrodes) - Can be run either AC or DC reverse polarity.

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