

## Postle Industries, Inc.

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Data Sheet

## POSTALLOY® PS-9 & PS-10

### Description:

**POSTALLOY PS-9 & PS-10** are tungsten carbide, nickel base hardfacing wires designed to resist severe abrasion, but unlike traditional tungsten carbide wires, they absorb more impact without fracturing. These alloys can be applied crack-free with the proper welding procedures. These alloys are great for parts that are repeatedly hardfaced and are prone to spalling. Because of the unique chemistry, Tungsten-Carbide-Nickel-Chromium-Silicon-Boron, they also have excellent resistance to erosive wear, frictional wear, corrosive wear, and maintain their hardness, even at temperatures of 1100°F (565°C). Weld deposits contain up to 50% fully fused, pre-alloyed carbides. The alloying elements in these wires produce a high hardness alloy that encapsulates and protects the carbide particles, reducing premature wear caused by erosion next to the carbide particles. **Postalloy PS-9 & PS-10** have very good weldability and a very soft arc, this, in combination with the nickel matrix, reduces weld dilution and carbide dilution to produce truly outstanding multi-wear wires. Do not apply PS-9 or PS-10 on previous hardfacing deposits that had cracking and spalling issues.

**POSTALLOY PS-9** is softer, 40-45 Rc, with a tougher matrix than **PS-10** for applications that require more toughness. It has the same carbide hardness and concentration.

### Specifications:

Wire type: Metal-Cored, Gas-Shielding is preferred but this alloy will also weld well without a shielding gas. Deposits are slag free.

### Weld deposit properties:

Average Hardness

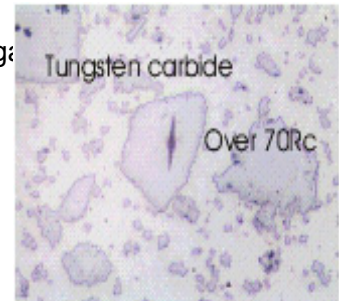
Matrix - 50-55 Rc

Tungsten carbide - 2400 HV (70 Rc+)

Deposit Thickness - 2 layers maximum

Weld Deposits Cannot be Flame Cut

Weld Deposits can be applied crack free with the proper welding procedure.



### Applications:

Oil and Gas Drilling Down Hole Tools - stabilizers  
Processing Equipment - mixer blades - feed screws  
Dredging Equipment - cutter heads, shredding, hammers  
Wear Rings

### Welding Parameters: DC Reverse

Preferred Shielding Gas:

95-97% Argon, balance 2-5% CO<sub>2</sub> @35 CFH

Alternate Shielding Gas:

75/25 Argon/CO<sub>2</sub>

Amperage 140-190

170 amp

Voltage 20-24

22 volts

Stick-out 1/2"-5/8"

### Packaging:

1/16 on 25 lb spools

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