

POSTALLOY® PS-9 and PS-10 Data Sheet



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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 (593°C). Weld deposits contain over 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. POSTALLOY® PS-9 is softer, 40-45Rc, with a tougher matrix than PS-10 for applications that require more toughness. It has the same carbide hardness and concentration.



Stabilizers

Specifications

Product Type

Tungsten Carbide Wire: Metal-cored, Gas-shielded
Deposits are slag-free.

Weld Deposit Properties

Ave Weld Deposit Hardness PS-9: 40-45Rc
Ave Weld Deposit Hardness PS-10: 50-55Rc
Ave Hardness Tungsten carbide: 2400 HV (70 Rc+)
Deposit Thickness: 2 layers maximum
Weld deposits cannot be flame-cut
Can be applied crack-free with proper welding procedure

Applications

Processing equipment	
Mixer blades	Dredging equipment
Feed screws	Cutter heads
Oil and gas drilling	Shredding
Down hole tools	Hammers
Stabilizers	Wear rings

POSTALLOY® PS-9 and PS-10 Welding Parameters

Current: DC Reverse Polarity

Diameter	Amps	Volts	Stick Out
1/16" (1.6mm)	160-180	21-23	1/2"(12.5mm)

Welding Procedure

Preferred Shielding Gas: 100% Argon
It is highly recommended that the gun and cable length be 8 to 10 feet.
Drive rolls should be designed for 1/16" (1.6mm) wire.

Packaging Options

Diameter	Standard Packaging
1/16" (1.6mm)	25 lb spool

