

## PRODUCT OVERVIEW

**POLYSTEL 1** (Cobalt Alloy 1) - a cobalt-based electrode, produces a deposit that exhibits excellent abrasion and corrosion resistance to many forms of chemical and mechanical degradation over a wide temperature range. POLYSTEL 1M derives its high temperature hardness and matrix toughness from the addition of tungsten. This alloy can be applied to any weldable steel, including all grades of stainless steel.

## APPLICATION

POLYSTEL 1 has found acceptance in a number of applications including: Wear pads , mixer rotors, and pump sleeves.

## SIZES AND PACKAGING

Diameter	Packaging
.093" (2.4mm)	11 lb (5.0kg)
.125" (3.2mm)	11 lb (5.0kg)
.157" (4.0mm)	11 lb (5.0kg)
.187" (4.8mm)	11 lb (5.0kg)

## POLYSTEL 1 CHEMISTRY, PERFORMANCE, AND SPECIFICATIONS

Material Chemistry (wt%)

C	Mn	Si	Cr	Fe	Mo	Ni	W	Co
2.1	0.8	1.0	30	4	1	3	12.5	Bal.

### Hardness

- ⇒ Room Temperature: 68°F (20°C)      Up to 57HRC
- ⇒ Work Hardened:      Up to 60 HRC

### Elevated Temperatures

- ⇒ 750°F (400°C):      Up to 49HRC
- ⇒ 1110°F (600°C):      Up to 45HRC
- ⇒ 1475°F (800°C):      Up to 42HRC
- ⇒ 1620°F (900°C):      Up to 40HRC

### Specifications

- ⇒ AWS 5.13 ECoCr-C

## RECOMMENDED WELDING PARAMETERS

Diameter	Recommended Current	Amperage	Position
.093" (2.4mm)	AC or DC Reverse (+)	65-85	Flat, horizontal
.125" (3.2mm)	AC or DC Reverse (+)	80-110	Flat, horizontal
.157" (4.0mm)	AC or DC Reverse (+)	100-130	Flat, horizontal