

PRODUCT OVERVIEW

POLYSEL 21 is a coated electrode that forms a low carbon, austenitic alloy, with excellent work hardening properties, high temperature strength and impact resistant. POLYSEL 21 is a good choice for hot die materials. Resistance to galling, corrosion and cavitation erosion makes POLYSEL 21 the number one choice to be used on steam and fluid control valve bodies and seats. It can be applied to all weldable steels, including stainless steels.

APPLICATION

Typical applications include overlays of sealing faces and moving parts of valve seats, valves of combustion engines, gas turbines, and hot working tools.

SIZES AND PACKAGING

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

POLYSEL 21 CHEMISTRY, PERFORMANCE, AND SPECIFICATIONS (typical weight %)

C	Mn	Si	Cr	Fe	Mo	Ni	W	Co
0.25	1.5	1.0	27.0	2.0	6.0	4.0	.50	Bal

Hardness

- ⇒ Room Temperature: 68°F (20°C) Up to 30-32HRC
- ⇒ Work Hardened: Up to 45 HRC

Elevated Temperatures

- ⇒ 750°F (400°C): Up to 33HRC
- ⇒ 1110°F (600°C): Up to 30HRC
- ⇒ 1475°F (800°C): Up to 28HRC
- ⇒ 1620°F (900°C): Up to 26 HRC

Specifications

- ⇒ AWS 5.13 ECoCr-E

RECOMMENDED WELDING PARAMETERS

Diameter	Recommended Current	Amperage	Position
.125" (3.17mm)	AC or DC Reverse (+)	80-110	Flat, horizontal
.156" (4.0mm)	AC or DC Reverse (+)	100-130	Flat, horizontal

The properties listed are typical and not to be construed as guaranteed values. Actual properties may vary depending on customer operating conditions. Polymet makes no warranties of merchantability and fitness for a particular purpose, except as expressly stated in Polymet's terms and conditions.