

PRODUCT OVERVIEW

POLYSEL 1 (Cobalt Alloy 1) is an excellent high temperature wear resistance alloy, consisting of a rich cobalt matrix with a high degree of chromium and tungsten carbides. This alloy is excellent when used in high temperature abrasive wear applications. It can also be specified in a number of different corrosive medias such as down hole sour gas applications.

APPLICATION

POLYSEL 1 has found acceptance in a number of applications where galling, abrasion and corrosion are a problem. Applications include shaft sleeves, bushings, hot metal working rolls, bearings in rock bits, and seaming rolls for beverage cans. It should be noted that it is very difficult to put this hardfacing down on large areas crack free. Minor cross checking on large components should be expected.

SIZES AND PACKAGING

Diameter	Packaging
.045" (1.2mm)	Various
.062" (1.6mm)	Various
.093" (2.4mm)	11 lb (5 kg)
.125" (3.2mm)	11 lb (5 kg)
.156" (4.0mm)	11 lb (5 kg)
.187" (4.8mm)	11 lb (5 kg)
.250" (6.4mm)	11 lb (5 kg)

POLYSEL 1 CHEMISTRY, PERFORMANCE, AND SPECIFICATIONS

Material Chemistry (wt%)

Co	C	Cr	W	Other
BAL	1.9	25.5	12.5	<5

Properties

- ⇒ Tensile Strength: 80,000 PSI
- ⇒ Hardness: 48-54 HRC (double layer on carbon steel)

Specifications

- ⇒ AWS 5.21 ERCoCr-C
- ⇒ UNS R30001
- ⇒ MIL-R-17131

RECOMMENDED WELDING PARAMETERS

Diameter	Current	Voltage	Amperage
.045" (1.2mm)	DCEN	20-24	70-90
.062" (1.6mm)	DCEN	20-24	80-100
.125" (3.1mm)	DCEN	-	115-135