

DESCRIPTION

Executive Cobalt 21 is a cobalt based alloy designed for resistance to impact, thermal fatigue, and corrosion at temperatures up to 815°C (1,500°F). While Executive Cobalt 21 is not used for severe abrasion applications, the weld deposit exhibits superior resistance to heat checking, spalling, chipping, and erosion.

Executive Cobalt 21 goes down relatively soft as welded but will work harden to above 45 RC. As it is less crack sensitive than other cobalt alloys, it is typically used for build-up and on large sections.

APPLICATIONS & FEATURES

Welds made using Executive Cobalt 21 are used when the resistance to thermal shock is important. Typical hot work applications include impressions in forging dies, trimming dies, high temperature valves, punches, shear blades and extrusion dies.

Executive Cobalt 21 is also used to overlay parts subject to oxidizing and reducing atmospheres at temperatures up to 1,148°C (2,100°F).

TYPICAL WIRE CHEMISTRY & MECHANICAL PROPERTIES

C	Cr	Mo	Ni	Mn	Si	Fe	Co	TOE	
0.25	28.0	5.5	3.0	1.0	1.0	4.0	Rem	<0.50	
Abrasion Resist:	Good		Corrosion Resist:		Excellent		Machineability:		Excellent
Impact Resist:	Excellent		Hardness as welded:		30-35 RC		Hot Hardness:		Good to (650°C) 1200°F

TYPICAL WELDING PARAMETERS

Diameter	Voltage	Amperage	Stick-Out	Position	Shielding Gas
.045"	18-30	120-230	1/2"	Flat	100% CO ₂
.062"	20-30	150-250	1/2"	Flat	or Ar / CO ₂ Mixtures

STANDARD PACKAGING

Spools 33-lb spools

CLASSIFICATION

AWS A5.21/ASME SFA A5.21 Class ERCCoCr-E

