DURAMAX COBALT #1 -- COBALT STICK ELECTRODE

Classification: **ECoCr-C** ***Specification:*** AWS A5.13 / ASME SFA 5.13

Product Description:

DMCobalt#1 SMAW is a stick electrode that has the highest hardness of the cobalt alloys. The composition is such that primary hypereutectic carbides are found in the microstructure. This characteristic gives the alloy higher wear resistance, accompanied by reductions in the impact and corrosion resistance. The higher hardness also means a greater tendency to stress crack during cooling. This cracking tendency may be minimized by closely monitoring preheating, Interpass temperature and post heating techniques. While the CoCr deposits soften somewhat at elevated temperatures, they normally are considered immune to tempering. Used to build up mixer rotors and items that encounter severe abrasion and low impact.

Typical Applications:

- Wear Pads
- Mixer Rotors
- Pump Sleeves
- Burner Nozzles
- Kneadling Rolls
- Drawing Blocks
- Hot Rolls & Rolling Guides
- Screw Presses

Typical Chemical Composition (%)

C	Mn	Si	Cr	Ni	Mo	Fe	W	Co
1.7 - 3.0	2.0 max	2.0 max	25.0 - 33.0	3.0 max	1.0 max	5.0 max	11.0 - 14.0	Bal
2.1	0.60	0.60	28.10	2.40	0.10	4.10	12.30	Bal

Typical Deposit Characteristics:

- Abrasion Resistance	Excellent	- Hardness	HRC 43 - 58
- Impact Resistance	Fair, Not Recommended	- Hot Weld Hardness	Excellent
- Corrosion Resistance	Good	- Deposit Layers	2 Layers Maximum
- Magnetic	No	- Deposit Cross Checks	Some cracking possible
- Machineability	Use Carbide tools/grind	- Proper Heat Treatment	and Slow Cooling

Available sizes & recommended current: DC, Electrode Positive (reverse polarity)

Polarity	DC + (DCEP)	DC + (DCEP)	DC + (DCEP)
Size	1/8	5/32	3/16
Amperage Range	115 - 135	145 - 165	175 - 195

Note: Minimum preheat recommended is 400°F (204°C). Required preheat will depend on base material composition and component dimensions.

DURAMAX Brand **103 Queens Drive** **King of Prussia, PA 19406**
Phone: (484) 808-4200 **Toll free: (800) 692-5930** **Fax: (610) 265-7806**

The above information is to be use as a guideline and is taken directly from the manufacturers Technical Data Sheet. If additional information is needed please contact us at 1-800-692-5930