

DURAMAX COBALT #6 -- COBALT STICK ELECTRODE

Classification: ECoCr-A

Specification: AWS A5.13 / ASME SFA 5.13

Product Description:

DURAMAX Cobalt#6 SMAW electrodes are our most popular and useful cobalt alloy, it offers an excellent balance between impact, heat, corrosion and metal-to-metal abrasion resistance. It also offers outstanding anti-galling properties, superior high temperature hardness and resistance to cavitation erosion making it perfect to use as valve trim in steam engines or repairing worn machine parts. DMCobalt#6 is ideal for many hard-surfacing applications because of its resistance to mechanical and chemical degradation at extreme temperature produces a medium hardness cobalt-chromium deposit for high temperature applications with good abrasive wear and good impact resistance. It bonds well with all weldable steels, including stainless.

Typical Applications:

- Agitators - Chain Saw Bars - High Pressure-High Temperature Valves
- Hot Trimming Dies - Hot Punches - Hot Oil Pump Parts - Extruder Screws

Typical Chemical Composition (%)

C	Mn	Si	Cr	Ni	Mo	Fe	W	Co
0.7-1.4	2.0 max	2.0 max	25.0-32.0	3.0 max	1.0 max	5.0 max	3.0-6.0	Bal.

Deposited Chemical Composition (%) (Typical)

C	Mn	Si	Cr	Ni	Mo	Fe	W	Co
1.1	0.90	1.00	27.30	2.50	0.10	3.30	4.60	Bal.

Typical Deposit Characteristics:

- Abrasion Resistance Excellent - Hardness HRC 23 - 47
- Impact Resistance Good - Hot Weld Hardness Excellent
- Corrosion Resistance Good - Deposit Layers 2 Layers Maximum
- Magnetic No - Surface Cross Checks Not with proper preheat
- Machineability Use Carbide tools/grind - Proper Heat Treatment and Slow Cooling

Deposited Chemical Composition (%) (Typical)

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.