DURAMAX®
Inspiring the future generations of welders

Product Data Sheet

DMCO#21 -- DURAMAX COBALT #21 -- BARE WIRE

Classification: ***Specification:*** ***AWS A5.21 / ASME SFA 5.21***

Description:

DMCO#21 cobalt based bare cast rod that forms a low carbon, austenitic alloy, with excellent work hardening properties, high temperature strength and impact resistant. DMCO#21 deposits are stable during thermal cycling, making them a good choice for hot die materials. Resistance to galling, corrosion and cavitation erosion of DMCO#21 is the number one reasons it's used on steam and fluid control valve bodies and seats. It can be applied to all weldable steels, including stainless steels. Typical applications include steam turbine parts, mixer blades, extrusion dies, saw blades, pump impellers

Typical Chemical Composition (%)

C	Mn	Si	Cr	Ni	Mo	Fe	W	Co
0.15 - 0.45	1.5 max	1.5 max	25.0 - 30.0	1.5 - 4.0	4.5 - 7.0	3.0 max	0.50 max	Remainder

TOE = 0.50 max

Typical Deposit Characteristics:

- Abrasion Resistance	Excellent	- Cold Abrasion	Good
- Impact Resistance	Excellent	- Hot Abrasion	Good
- Erosion Resistance	Excellent	- Deposit Layers	unlimited
- Corrosion Resistance	Excellent	- Machinability	Use Carbide tools
- Typical Hardness	HRC 40 - 55	*With Proper Preheat and Slow Cooling	

Sizes available and recommended currents GTAW

Diameter	Process	Current	Voltage	Amperage	Shielding Gas
3/32" (2.4mm)	GTAW	DCEN	20 - 40	80 - 100	Argon
1/8" (3.2mm)	GTAW	DCEN	20 - 40	90 - 120	Argon
5/32" (4.0mm)	GTAW	DCEN	20 - 40	120 - 140	Argon
3/16" (4.8mm)	GTAW	DCEN	20 - 40	140 - 160	Argon

Sizes available and recommended setting for Oxyfuel

Diameter	Process	Tip Size / Flame
3/32" - 3/16" (2.4mm - 4.8mm)	OAW	#4 or #5 / 3X - 4X

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