



A Premium Metal Cored,
Gas-Shielded Wire for Exceptional
Resistance to Severe Abrasion

EnD0tec[®]
DO*611

- High density of macrocrystalline tungsten carbide particles evenly distributed in a corrosion resistant nickel matrix
- Provides exceptional resistance to extreme abrasive wear
- Retains properties in hot and high corrosion environments
- High deposition rate decreases labor costs

EnDotec® DO*611

EnDotec® DO*611 is a benchmark anti-wear alloy! Due to a very high density of Monocrystalline Tungsten Carbides (MTC) particles evenly distributed in a corrosion resistant nickel matrix, weld deposits exhibit enhanced anti-wear properties. Carbide segregation is greatly minimized due to the special coating pre-treatment given to the MTC particles. Even when subject to extreme abrasion, including those involving general corrosion media, weld deposits remain resistant throughout their through-thickness. In addition, weld deposits have little, if any, cross checking and tolerate low-to-moderate impact.

The highly stable Macrocrystalline Tungsten Carbides (MTC) in a reinforced nickel matrix makes weld overlays of DO*611 last longer than other high-carbide containing products.

The more thermodynamically stable MTCs display lower diffusion rates than conventional carbides. This is an important feature when considering the high energy process involved in weld overlays.

TECHNICAL DATA

Typical Values	
Typical hardness as deposited (1 pass):	55 HRC
Current & Polarity:	DC (+) electrode positive
Power Source Type:	Constant voltage & Integrated Wire Drive
Typical MTC Hardness:	HV 2100

1/16" (1.6MM)	VOLTS	AMPS	STICK-OUT	SHIELD GAS	FLOW RATE
Short Arc	17-24	120-180	1/2" ± 1/8"	1st: 98% Ar+2% O ₂ 2nd: 99% Ar+1% O ₂	35-45 SCFH

Note: To maximize service life, it is very important to keep welding amperages below 180 or application performance will be compromised.

PROCEDURE FOR USE

Preparation: Remove all contaminants, particularly oil & grease. Lightly grind surface to remove superficial oxides. Preheat according to the base metal make-up and potential to air harden.

Technique: After checking that the welding conditions are optimal by testing on scrap metal, position the gun head at a 70-80° angle and use a "push" technique for downhand welding. For fully automated welding such as hardfacing cement crusher rolls, the wire should exit at about a 10° lagging angle from top dead center. Using this technique will assure a smooth and regular weld deposit profile with the optimum level of fusion and deposit integrity.

Post-welding: All parts should be slow-cooled out of drafts and high moisture areas.

TYPICAL APPLICATIONS

APPLICATIONS

Dozer end-bits
Asphalt mixers
Pug mill augers
Bag packer screws
Pipe bends
Bucket lips
Drill collars
Ash handling units
Slag breakers
Anvil knives

INDUSTRY

Earthmoving
Road Construction
Brick & Clay
Cement
Mining
Dredging
Oil & Gas
Coal Fired Utilities
Steel
Logging & Lumber

