

Unique Gas Shielded Metal Cored Wire for Both Extreme Abrasion and Heavy Impact or Pressure

EnDotec® DO *327



WIRE

- Excellent for use against high pressure abrasion
- Weld deposits are ideal for multi-pass build up and are slag-free
- Easy-to-use wire with low fuming and minimal spatter
- High volume weld deposits reduce labor costs



DESCRIPTION:

EnDOTec DO*327 is a unique anti-wear alloy formulated to develop a dense, but very fine network of Niobium-carbides supported by a dual structure Cr-Mo matrix. This combination creates outstanding resistance to both high-pressure grinding abrasion and point-impact loading on carbon, low-alloy and manganese steels.

DO*327 welds are slag-free and ideal for multi-pass part restoration or protection. Deposits can be used as-welded, finished by grinding or cut with "air"-arc or plasma torches.

TECHNICAL DATA:

Typical Hardness 2 Passes: HRC 59

Power Source Type: Constant Voltage & Integrated Wire Drive

Current & Polarity: DC (+) electrode positive

Shielding Gas:

- 1) Argon 90% + 10% CO₂
- 2) Argon 98% + 2% O₂
- 3) Argon 75% + 25% CO₂

TYPICAL ANTI-WEAR APPLICATIONS & INDUSTRIES:

APPLICATIONS

Roll Grinders - breaker bars
Latch keys/bars - teeth
Bucket scoops - pump casings
Blades - stump removers
Crushers - discharge chutes
Plows - asphalt blenders
Knife Rotors

INDUSTRY

Cement
Open-Pit Mining
Dredging
Earthmoving
Quarries
Municipal Works
Recycling

WELDING PARAMETERS

DIAMETER	VOLTAGE	AMPERAGE	GAS FLOW
0.045"	18-26	160-260	35-40 scfh
1/16"	20-34	140-320	35-40 scfh

Note: Parameter adjustments will be needed depending on the size, weight, and shape of the part to be welded. For optimum wear resistance keep to the low end of the amperage and voltage ranges.

PROCEDURE FOR USE:

Caution: Although a 2-roll wire drive assembly will work the optimum for maintaining arc voltage stability and consistent and smooth wire feeding is a serrated 4-roll drive assembly. Smooth drive rolls are not recommended!

Step 1: Remove all cracked or spalled weld metal down to a sound base.

Step 2: Although EnDOTec DO*327 is highly recommended for multi-pass buildups (up to 5 passes), for applications requiring build-ups in excess of ½-1", a base coat should be used of EnDOTec DO*05 for manganese and low-alloy steels or EnDOTec DO*68S for carbon and low-alloy steels.

Step 3: Preheating depends on the steel's carbon equivalent and the workpiece size, thickness and geometry. Eutectic recommends...

CE<0.2: Preheat not necessary

CE 0.2-0.4: Preheat 210° - 390°F (100-200°C)

CE 0.4-0.8: Preheat 390° - 660°F (200-350°C)

NOTE that 12-14% Mn steels should never be preheated and the workpiece temperature during welding should be kept below 480°F (250°C).

Note: DO NOT HEAT HIGH MANGANESE STEELS SUCH AS HADFIELD CASTINGS!

Step 4: 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 cylindrical parts, 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.

Note: *If welding is interrupted and the part being welded cools to room temperature, make sure to reheat to the original preheat temperature.*

Step 5: For most applications, other than a superficial grind, finishing is not required. If some level of profiling is needed, grinding can be used for more precise shaping. In other cases the use of either arc- or plasma cutting would be suitable.

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