



Metal Cored Gas Shielded Wire for  
Semi-Automatic and Automatic  
Welding

**EnD0tec<sup>®</sup>**  
**DO\*02**

- Excellent crack resistance
- High resistance to metal/metal friction
- Good resistance to thermal cycling and oxidation at working temperatures up to 600°C (1100°F)
- Rapid work hardening
- Excellent as a tough cushion layer before hardfacing

Exclusive, gas shielded, metal cored alloy wire, ideal for maintenance and repair applications or batch manufacturing where the highest integrity welding, efficiency and productivity are required.

EnDOTec® DO\*02 is ideal for joining dissimilar martensitic or austenitic stainless steels. It can be applied either as a buttering layer or as an Eutectic TeroCote coating for protection against impact and high pressure.

## TECHNICAL DATA

Typical Values	
Hardness as deposited:	87-90 HRB
Work hardened hardness:	HRC 30-35
Current polarity:	DCEP (DC+)

DIAMETER	SHIELDING GAS*	AMPS	VOLTS	WIRE STICKOUT
0.045" (1.2 mm) spray	98% Argon + 2% O <sub>2</sub>	230-280	29-31	5/8 ± 1/8" (15mm - 19mm)
0.045" (1.2 mm) short arc	100% CO <sub>2</sub>	90-230	17-22	9/16 ± 1/16" (14mm - 15mm)
1/16" (1.6 mm) spray	98% Argon + 2% O <sub>2</sub>	270-325	27-31	5/8 ± 1/8" (15mm - 19mm)
1/16" (1.6 mm) short arc	100% CO <sub>2</sub>	110-300	16-20	9/16 ± 1/16" (14mm - 15mm)

\*Flow rates 30 to 40 scfh.

## PROCEDURE FOR USE

**PREPARATION:** Clean weld area of scale and/or oxide. A nominal preheat of 150°F (65°C) is advised if part is below 40°F (5°C) or over 25 mm (1") thick. For higher carbon steels higher preheats will be needed. Do not preheat manganese steel castings above 400°F (205°C) as this will cause time-temperature embrittlement.

**TECHNIQUE:** Maintain the optimum electrode stickout and hold a 75° angle from the vertical in the direction of travel. Do not weave excessively. Wide beads can cause porosity, excessive base metal overheating, and degrade the weld deposit wear properties. Back whip craters to reduce cracking tendencies and potential out-gassing.

**POST-WELDING:** Allow parts to slow cool in still air. High carbon steels and air hardenable steels should be covered with a heat-retardant blanket or by other means. If steel composition is unknown, slow cool at a rate of 100°F (38°C) per hour.

## TYPICAL APPLICATIONS

Designed for joining large sections of dissimilar composition: Armour plate, manganese steels. Furnace components. Superheated steam outlets. Rails and frog points.

For buttering layers, multi-pass protective coatings: Rail truck wheels, cylindrical crusher rolls, gyratory crusher cones, rolling mill inlet guides and drive sprockets.



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