



Gas Shielded Wire for
Semi-Automatic and Automatic Robotic Welding

EnD0tec[®]
DO*04



- Hardness obtained with first pass and maintained to maximum service temperature of 1020°F (550°C)
- Excellent corrosion and oxidization resistance at temperatures up to 1200°F (650°C)
- Excellent metal-to-metal friction resistance
- Ideal for use as cladding with no risk of cracking
- Excellent creep resistance - Good scaling resistance

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. The slag-free deposit is of the martensitic stainless steel type with hardness increased through precipitation (structural hardening). On stainless steels and alloys with high nickel content, structure and hardness depend on dilution.

- Good corrosion resistance in high temperature gaseous media: combustion chambers, diesel engines, valves.
- Good corrosion resistance in saline environment, with cavitation resistance
- No buttering layer necessary when coating heat-resistant steels of CrMo/CrMoV type
- Unique peripheral arc characteristics
- Maximized weld metal recovery
- Regular bead profile, virtually spatter free
- Wide parameter range
- Faster deposition rates for reduced labor costs

TECHNICAL DATA

Typical Values	
Typical Hardness after welding	HRC 48
Typical hardness after quenching	HRC 51
Typical hardness after annealing	HRC 38
Current polarity:	DCEP (+)

	DIAMETER	AMPS	VOLTS	SHIELDING GAS
Short Arc	0.045" (1.2mm)	15-20	80-200	100% Ar (recommended)
Transfer Mode	1/16" (1.6mm)	19-27	150-300	
Spray Arc	0.045" (1.2mm)	26-28	230-300	95% Ar + 5% CO ₂ (alternative)
Transfer Mode	1/16" (1.6mm)	27.5-33	250-400	

Flow rate: 35 scfh (16 L/min)

PROCEDURE FOR USE

EQUIPMENT: EnDotec continuous electrodes are compatible with most conventional, constant voltage power sources. Models with programmable, pulsed arc, metal transfer modes offer optimal performance. Eutectic Corporation recommends using wire drive systems using 4 feed rollers - smooth drive rolls are not recommended.

PREPARATION: Remove old welding deposits and worn metal completely with ChamferTrode.

PRE-HEATING: 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).

WELDING TECHNIQUE: For multi-pass, downhand coating push the electrode down the workpiece at an angle of 70/80° to ensure optimum fusion.

HEAT TREATMENT: Quenching temperature: 1900°F (1040°C). Stress relief annealing 2x2 hours at 1380°F (750°C).

TYPICAL APPLICATIONS

- Rods for hot extrusion profiles
- Feed rolls
- Sizing mandrels
- Clipping beds
- Furnace components
- Continuous casting guide tables
- Valve seats and heads
- Curving tram lines
- Blow out preventers (BOP)
- Hot working dies
- Dies

