



EnDOtec® DO*15

For High Speed Steel deposits

Description:

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

The slag free deposit is forgeable and can be heat treated. It is ideal for coating carbon steels, both low and high alloy steels, and manganese steels.

- Magnetic deposit
- Hard, tough deposit with no scaling
- No "sticking" of electrode or inclusions
- Low heat input for low dilution
- Maximum weld metal recovery
- Excellent bead appearance, no spatter, high arc stability
- Great flexibility in operation: 100-400 A
- Exceptional all-positional weldability
- High deposition rate for reduced labour costs

Technical data:

Hardness as welded (HRC): 53-60

Shielding gases:

Recommended gas: 97.5% Ar, 2.5% CO₂ [DIN 32526 M 12]

Alternative gases: 99% Ar, 1% O₂ [DIN 32526 M11]
100% Ar [DIN 32526 I1]
82% Ar, 18% CO₂ [DIN 32526 M21]

Flow rate (l/min): 12-16

Heat treatment:

Quenching temperature (°C): 1000-1060

Hardness (HRC): 57 (cooling in oil or air).

Annealing temperature (°C): 750-800.

Hardness (HV30) 230

Tempering temperature	500°C	=	55	HRC
	550°C	=	55	HRC
	600°C	=	48	HRC
	650°C	=	40	HRC

Applications:

- Designed for the protective coating of:
- Drills
- Conveyor chains
- Gravel pumps
- Hot and cold forming tools.

Procedure for use:

Welding Equipment:

EnDOtec continuous electrodes are compatible with most conventional, constant voltage power sources. Models with programmable, pulsed arc, metal transfer modes offer optimal performance. E+C recommends using wire drive systems fitted with 4 feed-rollers - smooth rollers for Ø 1.2 mm and knurled rollers for Ø1.6 mm - as well as polyamide liners.

Preparation:

Remove old welding deposits and worn metal completely with ChamferTrode 03/04.

Preheating:

Preheating depends on the steel's Carbon Equivalent, and the workpiece size, thickness and geometry. E+C recommends:

CE < 0.2 : preheat not essential

CE 0.2 - 0.4 : preheat 100-200°C

CE 0.4 - 0.8 : preheat 200-350°C.

Note that 12-14% Mn steels should never be preheated and the workpiece temperature during welding should be kept below 250°C.

Welding parameters:

Welding current := (+)

Diameters	1.2 mm		1.6 mm	
	Short arc	Spray arc	Short arc	Spray arc
Transfer mode				
Arc voltage (V)	17-22	29-31	16-20	27-31
Amperage (A)	90-230	230-280	110-300	270-325

Welding technique:

For multi-pass, downhand coating, push the electrode along the workpiece at an angle of 70-80°, to ensure optimum fusion.

Machining:

The deposit is machinable by grinding. Arc, oxyacetylene or plasma cutting equipment may also be used.

Packaging:

EnDOtec continuous electrodes are precision wound on recyclable, wire spools (DIN 8559, K300) to a standard weight of 12.5 kg and specially packed for optimum, storage protection.

DIGITALWELD

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