



Seamless, gas shielded, peripheric electrode

EnDOtec® DO*351

For semi - automatic and robotic welding

Description

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

High alloy Cr-Si-C steel for wear protective coatings. The air hardening deposit offers excellent resistance to wear caused by impact, adhesion (metal-metal friction) and abrasion. The forgeable deposit can be heat-treated or nitrided and withstands thermal shock.

Unique peripheral arc characteristics.

Low heat input for low dilution.

Maximised weld metal recovery.

Exceptional positional weldability.

Regular bead profile, virtually spatter free.

Versatile usage over wide parameter range.

Faster deposition rate for reduced labour costs.

Technical data

Standards

DIN 8555:.....MSG 6-GF-60-GP

EN 14700:T Fe 8

Mechanical properties

(All weld metal)

Typical

Hardness (HRC):.....58

Shielding gases

Recommended gas:82% Ar, 18% CO2

[EN ISO 14175: M21]

Alternative gases:.....96,5% Ar, 2,5% CO2, 1%O2

[EN ISO 14175: M14]

Flow rate (l/min):.....17

Applications

Designed specifically to provide protective coating against wear caused by impact, adhesion (metal-metal friction) and abrasion in industries such as:

Mines and quarries

Drill heads, breaker plates, crusher drums, conveyor and drag-line buckets.

Civil engineering

Gravel pumps, rails, crusher hammers, bucket ripper teeth, vehicle tracks, soil compactors.

Urban and industrial waste disposal

Grilles and frames of rotary sleeves, crushers, hydraulic compactors.

Procedure for use

Welding Equipment

EnDOtec seamless 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 smooth feed-rollers for Ø1.2 mm as well as polyamide liners.

Preparation

Remove old welding deposits and worn metal completely by grinding or 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.

Buttering layer

Deposit a buttering layer of EnDOtec DO*02 on austenitic manganese steels and EnDOtec DO*310 or DO*257 on mild and high strength steels.

Welding parameters

Welding current := (+)

Ø (mm)	Voltage (V)	Current (A)
1.2	12 – 35	50 – 320
1.6	16 - 38	60 - 420

Welding technique

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

The use of pulsed arc technology significantly improves semi-automatic welding productivity.

Welding position

EN: PA, PB, PC,

Machining

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

Packaging

EnDOtec seamless, copper coated electrodes are securely precision layer wound on recyclable, plastic spools (EN ISO 544: 2003, BS 300) to a standard weight of 15 kg for optimum, storage protection.