

**Self-shielded, Peripheric Continuous Electrode
For Semi-automatic and Automatic Welding**

**TEROMATEC
OA 4601**

Description

Special, self-shielded, flux cored High Chromium alloy wire specifically developed for outdoor maintenance and repair welding of thick, heavy components where faster weld deposition rates over traditional coated electrodes, are required. Worn or new critical parts may be cost effectively TeroCote protected either manually or fully automatically to extend their useful service life and increase productivity and profitability.

High chromium, Hypereutectic alloy for wear-preventive protective coatings on low or high alloy steels and 14% manganese steels.

- Excellent resistance to grinding abrasion with compression and medium impact.
- Multi pass capability.
- Few slag residues to clean.
- Cannot be cut using oxy - fuel processes
- Ideal choice for field work or on-site applications
- No need for costly gas cylinders, regulators or flow meters
- Core deoxidizers tolerate air currents or draught effects
- Relatively thick, wide overlays possible in single pass
- Superior electrode efficiency due to low flux to metal ratio
- No stub end losses promote material cost savings

Technical data

Mechanical properties

Hardness (HRC): 58 - 62 (Typical)

Applications

For wear preventive protection of parts in the quarry, cement, sand and gravel, dredging, foundry industries :
Crusher rolls, dredge cutters, rolls, crusher pinions and grinders, cement conveyor screws, hydro-pulpers, bucket shovel teeth and edges, dragline parts, chutes, mixer arms, scraper blades, screws, Gyrotory mantles, Scrubbers, etc.

Nominal Chemical Composition (%) :

C	Mn	Si	Cr	Fe
4 - 4.8	1.3-1.5	1.5	24.0 - 26.0	Bal.

OA 4601 : No Molybdenum , composition as above
OA 4601Mo : 1% Mo . C, Mn, Si, Cr composition same as above

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Procedure for use

Preparation

Remove any previous weld deposits or cracked metal with ChamferTrode

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.

Intermediate layer / Build up Layer

On 12-14% Mn steels, deposit intermediate layers with TeroMatec 3205 or with the manual electrode EutecTrode 6450 / N40. On hardenable and air-hardening steels, deposit intermediate layers with TeroMatec 3302 or XHD646.

Welding parameters

Welding current: DC +

Procedure

For thick sections and high deposition rates.

Ø (mm)	Welding current (A) For Thick sections & High Deposition Rates	Welding current (A) For Thin sections, Minimum dilution & Low Heat Input
1.6	160-220	160-220
2.4	200-350	200-350
2.8	250-400	250-400

Welding technique

With TeroMatec 400 / 500 :

After striking, maintain the wire stick-out around 40 mm with an arc length approx. 7 mm. Longer wire stick-out will further increase deposition rates. For optimum deposit quality, use drag stringer bead or moderate weaving techniques to minimize overheating risks.

Packaging

TeroMatec continuous electrodes are precision wound on recyclable, 250 kg Drum packs , 15 kg spools are also available.



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