



**MWA  
Product Guide  
2nd Edition**





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**MAC TRODE E6716**

Manual Metal Arc welding electrode with a silicon free C: Mn core wire with a concentrically extruded chemically basic flux coating which has been so modified to provide good weldability on poor quality AC welding sets.

**Material to be Welded:** Mild and medium carbon-manganese steels up to 15mm thick with a UTS of 500N/mm<sup>2</sup> max. Typical grades:- BS1449 plate and sheet BS4360 grade 43A and 43C Lloyds A and D ship steel BS4360 grade 50B, Lloyds grade AH and DH BS3059 and BS3601 grade 320-410 AP15L A-B and X42, BS4360-50B-50C-50D, BS1501-151 430-490, BS3602-410-460.

**Typical All Weld Metal Chemical Analysis (%)**

C	Mn	P	S	Si
0.08	0.80	0.020	0.020	0.65

**Typical All Weld Metal Mechanical Properties**

As Welded	Typical
Tensile Strength	580 N/mm <sup>2</sup>
0.2% Proof Stress	500 N/mm <sup>2</sup>
Elongation	28%
Reduction of Area	70%

**Sizes Available & Recommended Amperages**

2.5mm	3.2mm	4.0mm	5.0mm	6.0mm
60-100	80-130	120-170	140-200	190-250

**Related Specification:**  
AWS A5.1 E7016 | ISO E51 44 B 24H

**Current:**  
AC/DC AC (OCV 50) min

**Storage:**

If allowed to become damp, the electrodes should be re-dried for one hour at 150°C before use.

**MAC TRODE E6718**

High quality superior all positional low hydrogen Manual Metal Arc welding electrode using a silicon free, low nitrogen, high purity C:Mn core wire with concentrically extruded, moisture resistant chemically basic flux with a controlled iron powder addition, to provide 120% metal recovery. Welds are of smooth appearance, ductile and of high radiographic quality.

For welding mild and medium tensile steels and for BS4360 1972 steels where low hydrogen levels and crack resistant weld metal are required.

The electrodes are particularly suitable for welding heavy sections subject to high levels of resistance and for welding problem steels with high sulphur content. Recommended for unalloyed C:Mn ferritic steels with high sub-zero toughness requirements, e.g:- Charpy values down to -60°C. CTOD values at -10°C. Used to best advantage for welding thick sections either on site or in fabrication shops. Excellent all positional weldability.

**Typical All Weld Metal Chemical Analysis (%)**

C	Mn	P	S	Si
0.08	1.60	0.015	0.010	0.30

**Typical All Weld Metal Mechanical Properties**

As Welded	Typical
Tensile Strength	560 N/mm <sup>2</sup>
0.2% Proof Stress	460 N/mm <sup>2</sup>
Elongation of 4d	25%
Reduction of Area	70%
Impact Energy @ 0°C	110J

**Sizes Available & Recommended Amperages**

2.5mm	3.2mm	4.0mm	5.0mm	6.0mm
70-90	90-130	130-180	160-220	250-300

**Related Specification:**  
AWS A5.1 E7018-1 | ISO 2560 E51 B110 26H

**Current:**  
AC/DC+ (OCV 70 amps) min

**Storage:**

If allowed to become damp, the electrodes should be re-dried for one hour at 150°C before use.

## MILD & LOW CARBON MAGANESE STEELS

### MAC TRODE E6724

#### MAC TRODE E6724

High quality mild steel iron powder electrode with recovery rate of 170-180% with respect to the weight of the core wire. Designed specifically for mild steel heavy fabrications where downhand ('V' preparation) welding involves large volume deposits to be laid using single or multi-pass techniques. Easy to use electrode employing either conventional or touch welding techniques.

**Material to be Welded:** Heavy mild steel fabrication where extended runs are involved demanding large volume of weld metal deposits in the shortest possible time. Can be used for either fillet or butt joints. Mild and medium carbon-manganese steels up to 15mm thick with a UTS of 500 N/mm<sup>2</sup> max. Typical grades:- BS1449 plate and sheet BS4360 grades 43A and 43C Lloyds A and D ship steel BS4360 grade 50B Lloyds grade AH and DH BS3059 and BS3601 grade 320-410 AP15L A-B and X42.

#### Typical All Weld Metal Chemical Analysis (%)

C	Mn	P	S	Si
0.06	0.50	0.024	0.021	0.30

#### Typical All Weld Metal Mechanical Properties

As Welded	Typical
Tensile Strength	540 N/mm <sup>2</sup>
0.2% Proof Stress	480 N/mm <sup>2</sup>
Elongation	28%
Reduction of Area	70%
Impact Energy @ 0°C	55 Joules

#### Sizes Available and Recommended Amperages

2.5mm	3.2mm	4.0mm	5.0mm	6.0mm
70-90	90-110	120-150	160-200	200-300

#### Related Specification:

AWS A5.1 E7024

#### Current:

AC/DC DC electrode positive (+/-) AC (OCV 50) min

#### Storage:

If allowed to become damp, the electrodes should be re-dried for one hour at 300°C before use.

## MILD & LOW CARBON MAGANESE STEELS

### MAC TRODE E6728

#### MAC TRODE E6728

High quality mild steel iron powdered electrode with recovery rate of approximately 150%. Designed specifically for mild steel heavy fabrications where downhand, ('V' preparation) welding involves large volume deposits to be laid using single or multipass techniques. Very easy slag detachability – self releasing. Ideal for heavy mild steel fabrications where extended runs are involved demanding large volumes of weld metal deposits in the shortest possible time. Can be used for either fillet or butt joints.

**Material to be Welded:** BS 1449 BS4360 GRADE 43A 43C 50B 50C & 50D LLOYDS A & D SHIP STEELS LLOYDS AH AND DH BS 1501 – 151 430 – 490.

#### Typical All Weld Metal Chemical Analysis (%)

C	Mn	P	S	Si
0.08	1.10	0.009	0.011	0.45

#### Typical All Weld Metal Mechanical Properties

As Welded	Typical
Tensile Strength	560 N/mm <sup>2</sup>
0.2% Proof Stress	460 N/mm <sup>2</sup>
Elongation	25%
Reduction of Area	70%
Impact Energy @ -60°C	110 Joules

#### Sizes Available and Recommended Amperages

2.5mm	3.2mm	4.0mm	5.0mm	6.0mm
90-110	100-140	140-190	170-230	260-320

#### Related Specification:

AWS A5.1 E7028

#### Current:

AC/DC (+)

#### Storage:

If allowed to become damp, the electrodes should be re-dried for one hour at 250°C before use.