



**MWA  
Product Guide  
2nd Edition**



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**MAC FINE STEEL**

High quality all-positional mild steel electrode. Easy to use employing touch or conventional welding techniques. Designed for joining light or heavy mild steel sections, highly suitable for use in confined spaces.

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

C	Mn	P	S	Si
0.07	0.47	0.021	0.020	0.4

**Typical All Weld Metal Mechanical Properties**

Ultimate Tensile Strength	540 N/mm <sup>2</sup>
0.2% Proof Stress	530 N/mm <sup>2</sup>
Elongation	28%
Hardness	190 Brinell

**Sizes Available & Recommended Amperages**

1.5mm	2.0mm	2.5mm	3.2mm	4.0mm	5.0mm	6.0mm
25-50	40-60	55-90	70-120	110-160	140-200	200-290

**Related Specification:**

AWS A5.1 E6013 | E43 22 R21

**Current:**

AC/DC (+) (AC min. 50 volts open circuit)

**Storage:**

If allowed to become damp, the electrodes should be re-dried for one hour at 110° before use.

**MAC NIL SIL**

Manufactured using a silicon free mild steel core wire and a highly chemically acid type (but non-corrosive) extruded flux coating. Welds with a forceful arc leaving a minimum of slag. The minimum silicon, combined with its overall purity, ensures the weld metal has excellent resistance to corrosion /erosion by molten zinc at temperatures of 450–500°C. It is suitable for welding and repairing fabricated galvanising containers constructed from high purity iron as defined by BS2858.

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

C	Mn	P	S	Si
0.02	0.2	0.01	0.01	0.02

**Typical All Weld Metal Mechanical Properties**

Ultimate Tensile Strength	450 N/mm <sup>2</sup>
0.2% Proof Stress	370 N/mm <sup>2</sup>
Elongation	30%
Reduction of Area	60%

**Sizes Available & Recommended Amperages**

2.5mm	3.2mm	4.0mm	5.0mm
60-90	80-140	100-180	200-300

**Related Specification:**

AWS E6013 (Nearest)

**Current:**

AC/DC (+)

**Storage:**

If allowed to become damp, the electrodes should be re-dried for one hour at 110°C before use.

**MAC SUPER STEEL**

Superior all positional mild steel electrode for joining light and heavy gauge steel sections. May be used with conventional or touch welding techniques and are particularly suitable where welding has to be carried out in confined or awkward places. Welds are ductile and of a high radiographic quality.

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

C	Mn	P	S	Si
0.07	0.55	0.013	0.020	0.34

**Typical All Weld Metal Mechanical Properties**

Ultimate Tensile Strength	530 N/mm <sup>2</sup>
0.2% Proof Stress	510 N/mm <sup>2</sup>
Elongation	29%
Hardness	160 Brinell

**Sizes Available & Recommended Amperages**

1.5mm	2.0mm	2.5mm	3.2mm	4.0mm	5.0mm	6.0mm
25-50	40-60	55-100	90-130	130-190	190-240	220-290

**Related Specification:**

| E6013 |

**Current:**

AC/DC (+) (AC min. 50 volts open circuit)

**Storage:**

If allowed to become damp, the electrodes should be re-dried for one hour at 110° before use.

**MAC SUPER STEEL VDH**

All positional superior electrode for joining light and heavy gauge mild steel. Due to its characteristics, this electrode is suited to applications in confined and awkward spaces involving positional vertical down welding.

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

C	Mn	P	S	Si
0.08	0.35	0.021	0.019	0.35

**Typical All Weld Metal Mechanical Properties**

Ultimate Tensile Strength	550 N/mm <sup>2</sup>
0.2% Proof Stress	530 N/mm <sup>2</sup>
Hardness	180 Brinell

**Sizes Available & Recommended Amperages**

2.5mm	3.2mm	4.0mm
55-100	90-130	130-190

**Related Specification:**

AWS A5 E6013 VDH | E43 22 R3

**Current:**

AC/DC (+) (AC min. 50 volts open circuit)

**Storage:**

If allowed to become damp, the electrodes should be re-dried for one hour at 110° before use.