# WB12018-M MMA WELDING ELECTRODE

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|---|---|
| **Classification** | **AWS A5.5:** E12018-M **BS EN ISO 18275:** E79 4 Mn2Ni1CrMo B 4 2 H5 |
| **Product Description** | Fully positional, basic coated, low hydrogen electrode. Exceptional mechanical properties. Has a nominal recovery of ~110%. Excellent de-slag, re-strike and general welder appeal. |
| **Application** | Used for the welding of HY80, HY100 and other high yield alloy steels where the weld metal properties must match those of the parent material after normalising followed by quenching and tempering. |

**All-Weld Metal Composition (Wt. %)**

| | C | Mn | Si | S | P | Cr | Ni | Mo | Cu | V |
|---|---|---|---|---|---|---|---|---|---|---|
| **min.** | 0.03 | 1.30 | 0.20 | - | - | 0.40 | 2.00 | 0.30 | - | - |
| **max.** | 0.06 | 2.00 | 0.40 | 0.020 | 0.025 | 0.80 | 2.50 | 0.55 | 0.050 | 0.050 |

**Typical All-Weld Metal Mechanical Properties**

| | | |
|---|---|---|
| Ultimate Tensile Strength | N/mm² | 830 min. |
| Yield Stress/0.2% Proof Stress | N/mm² | 745-830 |
| Elongation on 5D | % | 18 |
| Impact Energy CV @ -51°C | Joules | 27 |

As welded

| **Electrode Dia (mm)** | | 1.6mm | 2.0mm | 2.5mm | 3.2mm | 4.0mm | 5.0mm | 6.0mm |
|---|---|---|---|---|---|---|---|---|
| **Electrode Length (mm)** | | - | - | 350 | 450 | 450 | 450 | 450 |
| **Current Range (Amps)** | **min.** | - | - | 70 | 90 | 130 | 160 | 230 |
| | **max.** | - | - | 90 | 140 | 180 | 220 | 280 |
| **Packaging Information** | | | | | | | | |
| **Kg Per Packet** | | - | - | 5 | 5 | 5 | 5 | 5 |
| **Approx. Pieces Per Kg** | | - | - | 44 | 21 | 14 | 10 | 7 |

**Storage and Re-baking**

**Storage**

It is recommended that the WB range of electrodes are stored in a dry heated store at a minimum temperature of 18°C, and a maximum relative humidity of 60%. To avoid damage to the coatings no more than 4 cartons should be staked on top of another.

**Re-drying**

Re-dry @ 350°C for 2 hours and then transfer to holding oven and hold @ 100 - 200°C, or 50-100°C in heated quiver.

**Current Conditions AC (OCV70) DC+ and Welding Positions**