

## Spot welding of metal

### GENERAL DESCRIPTION

Welding electrode used for spot welding of metals.

Replaces expensive spot welding- or other resistance welding machines, as well as most bolt-screw-nut joints and aluminium riveting.

Joins sheets with a total thickness of up to 10 mm (5 to 5 mm; 1 to 9 mm; ...) with a complete penetration.

Also suitable for spotting (or riveting) sheets of 10mm or less to heavier work pieces without complete penetration.

Suitable for plating stainless steel on mild steel.

### APPLICATIONS

Chemical industry (spot welding stainless steel sheet to profiles without drilling through the stainless steel sheet).

General workshops (e.g. gates where sheet on profiles have been fixed and that become frequently detached due to contact with forklifts).

Garages (e.g. hooks for fixing the canvas to lorries).

### CHEMICAL COMPOSITION (%) (Typical values, all weld metal)

|      |      |      |         |      |      |      |      |      |      |
|------|------|------|---------|------|------|------|------|------|------|
| C :  | 0.05 | Cr : | 17.25   | Mo : | 3.25 | Mn : | 1.00 | Si : | 1.10 |
| Ni : | 9.00 | Fe : | Balance |      |      |      |      |      |      |

### MECHANICAL PROPERTIES (Typical values, all weld metal)

| Yield Strength<br>N/mm <sup>2</sup> | Tensile Strength<br>N/mm <sup>2</sup> | Elongation<br>5d (%) | Impact Strength<br>Charpy V notch (ISO-V) |
|-------------------------------------|---------------------------------------|----------------------|---|
|                                     | ≥ 650 MPA                             | ≥ 35%                |   |

### GENERAL INFORMATION

|                            |  |          |           |           |           |
|----------------------------|--|----------|-----------|-----------|-----------|
| <b>Welding positions</b>   | PA, PB, PC                                       |          |           |           |           |
| <b>Shielding gas</b>       | NA   |          |           |           |           |
| <b>Packing</b>             | 5 kg in a plastic box                            |          |           |           |           |
| <b>Polarity</b>            | Ac or DC, straight polarity (electrode negative) |          |           |           |           |
| <b>Diameter (mm)</b>       | 1.5  | 2.0      | 2.5       | 3.2       | 4.0       |
| <b>Length (mm)</b>         | 250  | 250      | 350       | 350       | 350       |
| <b>Approx. current (A)</b> | 50 - 100   | 90 - 140 | 140 - 180 | 190 - 230 | 250 - 350 |

#### Tips & Tricks

1. Keep the electrode perpendicular to the work piece.
2. Keep a very short arc and push the electrode into the molten pool.
3. As soon as the required penetration is obtained, retract the electrode a few mm to form the head of the "rivet".

*The information in this document is based on intensive tests and is accurate to the best of our knowledge. Do note that these values are only typical values for tests in accordance to prescribed standards. The suitability of the product should always be confirmed by qualification tests before use in any application. The information can be changed without previous notice.*