# exothermic welding CC41

Copper conductor branch joint

**Complies with IEEE 837 and UL 467**

Conductor-to-conductor exothermic welding



| | |
|---|---|
| Code | CC41 |
| Connection type | Copper conductor branch joint |
| Group | Conductor to conductor |
| Conductor cross-section | 35 to 185 mm² |
| Branch conductor | 35 to 185 mm² |
| Weld powder | KWD 090 to 2 × KWD 250 |
| Matching handle clamp | HC 02 |
| Standard | As per IEEE 837 and UL 467 |
| Mould body material | High-grade graphite |
| Mould lid material | Stainless steel |
| Mould life | 50 to 60 welds with correct use |

exothermic welding CC41 Used for branch joints on copper conductors in earthing, bonding and lightning protection networks. After welding, the joint fuses with the conductors and has no nuts or bolts to work loose over time.

## Mould and powder selection table

| Main conductor (mm²) | Branch conductor (mm²) | Weld powder | Mould code |
|---|---|---|---|
| 35 | 35 | KWD 090 | CC41-035-035 |
| 50 | 35 | KWD 115 | CC41-050-035 |
| 50 | 50 | KWD 150 | CC41-050-050 |
| 70 | 35 | KWD 150 | CC41-070-035 |
| 70 | 50 | KWD 200 | CC41-070-050 |
| 70 | 70 | KWD 200 | CC41-070-070 |
| 95 | 35 | KWD 200 | CC41-095-035 |
| 95 | 50 | KWD 200 | CC41-095-050 |
| 95 | 70 | KWD 250 | CC41-095-070 |
| 95 | 95 | KWD 250 | CC41-095-095 |
| 120 | 50 | KWD 250 | CC41-120-050 |
| 120 | 70 | KWD 250 | CC41-120-070 |
| 120 | 120 | 2 × KWD 150 | CC41-120-120 |
| 150 | 70 | KWD 250 | CC41-150-070 |
| 150 | 95 | 2 × KWD 150 | CC41-150-095 |
| 150 | 120 | 2 × KWD 200 | CC41-150-120 |
| 150 | 150 | 2 × KWD 200 | CC41-150-150 |
| 185 | 70 | 2 × KWD 200 | CC41-185-070 |
| 185 | 95 | 2 × KWD 200 | CC41-185-095 |
| 185 | 120 | 2 × KWD 250 | CC41-185-120 |
| 185 | 150 | 2 × KWD 250 | CC41-185-150 |
| 185 | 185 | 2 × KWD 250 | CC41-185-185 |

For 10/10, 10/16, 10/25, 16/10, 16/16, 16/25, 25/10, 25/16, 25/25, 35/10, 35/16, 35/25, use mould CC4 instead.

The mould code and powder size are also marked on the lid of each mould. Do not substitute powder from another mould or another size. For other sizes, contact our specialists.

## Preparation and welding

Cut the conductor end straight with wire cutters so the strands do not open and splay, brush up to about 5 cm of the end to a shine with a wire brush, and hold any conductor under tension or bent steady with a clamp.

1. Check the mould and powder against the table.
2. Preheat a cold mould before the first weld.
3. Clean the conductors to bright metal and dry them fully.
4. Close the handle clamp, place the conductors in the centre of the chamber and lock the mould.
5. Place the steel disc concave side up and pour in the powder.
6. Add the starting powder, close the lid and ignite it with a flint igniter.
7. Wait at least one minute, then open the mould.
8. Clean the mould with a soft brush and a scraper; never use a wire brush.

**Welds KALWELD Complies with IEEE 837 and UL 467** , welds KALWELD have passed freeze testing (10 cycles), thermal cycling (25 cycles) and a 20 kA short-circuit test at the Power and Water University of Technology (Shahid Abbaspour) (reports 95/4221 and 95/4220, 1395/12/24).

Result
**Approved by**

Full illustrated guide, safety notes and troubleshooting: exothermic welding instructions KALWELD at www.kalot.ir


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