

OK 61.85

Nb-stabilized basic coated electrode designed for welding of Nb- or Ti-stabilized stainless steels of the 19Cr10Ni-type. OK 61.85 provides the best hot cracking resistance of the products belonging to the 347 range. Due to the relatively high ferrite content level, the maximum working temperature should be limited to 400°C.

Specifications

| | |
|------------------------|---|
| Classifications | EN ISO 3581-A : E 19 9 Nb B 2 2 SFA/AWS A5.4 : E347-15 Werkstoffnummer : 1.4551 |
| Approvals | VdTÜV : 05663 |

Approvals are based on factory location. Please contact ESAB for more information.

| | |
|------------------------|-----------------|
| Welding Current | DC+ |
| Ferrite Content | FN 6-12 |
| Alloy Type | Austenitic CrNi |
| Coating Type | Basic |

Tensile Properties

| Testing Condition | Yield Strength | Tensile Strength | Elongation |
|--------------------------------------|----------------|------------------|------------|
| ISO | | | |
| Stress Relieved 16 hour(s) 600 °C | 500 MPa | 640 MPa | 40 % |
| As Welded | 500 MPa | 620 MPa | 40 % |

Charpy Testing

| Testing Condition | Testing Temp | Impact Value |
|-------------------|--------------|--------------|
| ISO | | |
| Stress Relieved | -60 °C | 40 J |
| As Welded | 20 °C | 100 J |
| As Welded | -60 °C | 70 J |
| Stress Relieved | 20 °C | 80 J |

Typical Weld Metal Analysis %

| C | Mn | Si | Ni | Cr | N | Nb | FN WRC-92 |
|------|-----|-----|------|------|------|------|-----------|
| 0.04 | 1.7 | 0.4 | 10.2 | 19.5 | 0.07 | 0.61 | 8 |

Deposition Data

| Diameter | Amps | Volts | Efficiency (Per) | Fusion time per electrode at 90Per I max | Deposition rate at 90Per |
|----------------|-----------|-------|------------------|--|-----------------------------|
| 2.5 x 300.0 mm | 55-80 A | 25 V | 60 % | 42 sec | 0.9 kg/h |
| 3.2 x 350.0 mm | 75-110 A | 23 V | 62 % | 64 sec | 1.2 kg/h |
| 4.0 x 350.0 mm | 80-150 A | 24 V | 61 % | 70 sec | 1.6 kg/h |
| 5.0 x 350.0 mm | 150-200 A | 23 V | 61 % | 76 sec | 2.3 kg/h |