

OK 68.81



OK 68.81 is a high-alloyed electrode which deposits a ferritic-austenitic duplex weld metal with approx. 40% ferrite. It is resistant to stress corrosion and is highly insensitive to dilution. Good scaling resistance up to 1150°C. OK 68.81 is used for joining dissimilar steels, steels with reduced weldability and buffer layers prior to hardfacing. Applications: rolls, forging dies, hot-work tools, dies for plastics and so on.

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|------------------------|---|
| Classifications | SFA/AWS A5.4 : E312-17 EN 14700 : E Fe11 EN ISO 3581-A : E 29 9 R 3 2 Werkstoffnummer : 1.4337 |
| Approvals | CE EN 13479 Seproz UNA 272580 |

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

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|------------------------|------------------|
| Welding Current | DC+, AC |
| Ferrite Content | FN 30 - 50 |
| Alloy Type | Stainless duplex |
| Coating Type | Acid Rutile |

Typical Tensile Properties

| Condition | Yield Strength | Tensile Strength | Elongation |
|------------|------------------|-------------------|------------|
| AWS | | | |
| As Welded | 610 MPa (88 ksi) | 790 MPa (115 ksi) | 25 % |

Typical Charpy V-Notch Properties

| Condition | Testing Temperature | Impact Value |
|------------|---------------------|-----------------|
| AWS | | |
| As Welded | 20 °C (68 °F) | 30 J (22 ft-lb) |

Typical Weld Metal Analysis %

| C | Mn | Si | Ni | Cr | Mo | N | Ferrite FN |
|------|-----|-----|------|------|------|------|------------|
| 0.13 | 0.9 | 0.7 | 10.2 | 28.9 | 0.04 | 0.09 | 40 |

Deposition Data

| Diameter | Current | Voltage | Number of electrodes/ kg weld metal | Burn-off Time/ Electrode | Deposition Efficiency % | Deposition Rate @ 90% I max |
|--------------------------------------|-----------|---------|--|-----------------------------|-------------------------|--------------------------------|
| 2.0 x 300.0 mm (5/64 x 11.8 in.) | 40-60 A | 22 V | 123 | 41 sec | 64 % | 0.7 kg/h (1.5 lb/h) |
| 2.5 x 300.0 mm (0.098 x 11.8 in.) | 50-85 A | 24 V | 78 | 48 sec | 64 % | 0.9 kg/h (2.0 lb/h) |
| 3.2 x 350.0 mm (1/8 x 13.8 in.) | 60-125 A | 25 V | 42 | 65 sec | 62 % | 1.3 kg/h (2.9 lb/h) |
| 4.0 x 350.0 mm (5/32 x 13.8 in.) | 80-175 A | 26 V | 26 | 66 sec | 62 % | 2.0 kg/h (4.4 lb/h) |
| 5.0 x 350.0 mm (0.197 x 13.8 in.) | 150-240 A | 28 V | 17 | 68 sec | 65 % | 3.2 kg/h (7.1 lb/h) |