

## OK Autrod NiCrMo-13

A continuous solid Ni-Cr-Mo electrode for welding of high alloyed Ni-base materials, 9 %Ni steel and super austenitic steels of type 20Cr-25Ni with 4-6 % Mo. Can also be used for welding carbon steel to Ni base steel. The weld metal has a very good toughness and is corrosion resistant over a wide range of applications in oxidizing and reducing media.

### Specifications

|                        |                                                                      |
|------------------------|----------------------------------------------------------------------|
| <b>Classifications</b> | SFA/AWS A5.14 : ERNiCrMo-13<br>EN ISO 18274 : S Ni 6059 (NiCr23Mo16) |
| <b>Approvals</b>       | VdTÜV : 12662 (MV)                                                   |

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

|                   |                                         |
|-------------------|-----------------------------------------|
| <b>Alloy Type</b> | Alloyed nickel (Ni + 23 % Cr + 16 % Mo) |
|-------------------|-----------------------------------------|

### Tensile Properties

| Testing Condition | Yield Strength     | Tensile Strength    | Elongation |
|-------------------|--------------------|---------------------|------------|
| As Welded         | 500 MPa ( 73 ksi ) | 750 MPa ( 109 ksi ) | 40 %       |
| As Welded         | 500 MPa ( 73 ksi ) | 700 MPa ( 102 ksi ) | 42 %       |

### Charpy Testing

| Testing Condition | Testing Temp        | Impact Value       |
|-------------------|---------------------|--------------------|
| As Welded         | -110 °C ( -166 °F ) | 120 J ( 89 ft-lb ) |

### Typical Wire Composition %

| C    | Mn  | Si  | Ni  | Cr   | Mo   | Al  | Fe  |
|------|-----|-----|-----|------|------|-----|-----|
| 0.01 | 0.2 | 0.1 | Bal | 23.0 | 16.0 | 0.3 | 1.0 |

### Typical Weld Metal Analysis %

| C     | Mn   | Si   | S     | P     | Cr   | Mo   | Al   | Co   | Fe  |
|-------|------|------|-------|-------|------|------|------|------|-----|
| 0.002 | 0.15 | 0.03 | 0.002 | 0.003 | 22.7 | 15.4 | 0.15 | 0.02 | 0.5 |

### Deposition Data

| Diameter                | Amps      | Volts   | Wire Feed Speed                       | Deposition Rate                   |
|-------------------------|-----------|---------|---------------------------------------|-----------------------------------|
| 1.0 mm<br>( 0.040 in. ) | 100-200 A | 21-27 V | 6.0-13.0 m/min<br>( 236-512 in./min ) | 2.5-5.5 kg/h<br>( 5.5-12. lbs/h ) |
| 1.2 mm<br>( 0.047 in. ) | 160-280 A | 24-30 V | 6.0-10.0 m/min<br>( 236-394 in./min ) | 3.6-6.0 kg/h<br>( 7.9-13. lbs/h ) |
| 1.6 mm<br>( 1/16 in. )  | 200-350 A | 25-32 V | 4.0-8.0 m/min<br>( 157-315 in./min )  | 4.3-8.6 kg/h<br>( 9.5-19. lbs/h ) |