

## OK Autrod 316L

A continuous solid corrosion resisting chromium-nickel-molybdenum wire for welding of austenitic stainless alloys of 18% Cr - 8% Ni and 18% Cr - 10% Ni - 3% Mo-types. OK Autrod 316L has a good general corrosion resistance, particularly against corrosion in acid and chlorinated environments. The alloy has a low carbon content which makes it particularly recommended where there is a risk of intergranular corrosion. The alloy is widely used in the chemical and food processing industries as well as in ship building and various types of architectural structures.

|                                       |  |
|---------------------------------------|--|
| <b>Classifications Wire Electrode</b> | SFA/AWS A5.9 : ER316L<br>EN ISO 14343-A : G 19 12 3 L<br>Werkstoffnummer : ~1.4430 |
| <b>Approvals</b>                      | CE EN 13479  |

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

|                      |  |
|----------------------|--|
| <b>Alloy Type</b>    | Austenitic (with appr. 8 % ferrite) 19 % Cr - 12 % Ni - 3 % Mo - Low C |
| <b>Shielding Gas</b> | M12, M13 (EN ISO 14175)  |

### Typical Tensile Properties

| Condition               | Yield Strength | Tensile Strength | Elongation |
|-------------------------|----------------|------------------|------------|
| SHT<br>(1050°C 0.5h)    | 350 MPa        | 590 MPa          | 42 %       |
| As Welded               | 440 MPa        | 620 MPa          | 37 %       |
| <b>Tested at 350°C.</b> |                |                  |            |
| As Welded               | 340 MPa        | 440 MPa          | 26 %       |
| SHT<br>(1050°C 0.5h)    | 250 MPa        | 430 MPa          | 31 %       |

### Typical Weld Metal Analysis %

| C    | Mn  | Si  | S     | P     | Ni | Cr   | Mo  | Cu  |
|------|-----|-----|-------|-------|----|------|-----|-----|
| 0.02 | 1.8 | 0.4 | 0.015 | 0.015 | 12 | 18.5 | 2.7 | 0.1 |

### Typical Wire Composition %

| C    | Mn  | Si  | Ni   | Cr   | Mo  | N    | FN WRC-92 |
|------|-----|-----|------|------|-----|------|-----------|
| 0.01 | 1.7 | 0.4 | 12.0 | 18.2 | 2.6 | 0.04 | 7         |

### Deposition Data

| Diameter               | Current   | Voltage | Wire Feed Speed                     | Deposition Rate                 |
|------------------------|-----------|---------|-------------------------------------|---------------------------------|
| 0.8 mm<br>(0.030 in.)  | 55-160 A  | 15-24 V | 4.0-17.0 m/min<br>(157-669 in./min) | 1.0-4.1 kg/h<br>(2.2-9.0 lb/h)  |
| 0.9 mm<br>(0.035 in.)  | 55-160 A  | 15-24 V | 4.0-17.0 m/min<br>(157-669 in./min) | 1.0-4.1 kg/h<br>(2.2-9.0 lb/h)  |
| 1.0 mm<br>(0.040 in.)  | 80-240 A  | 15-28 V | 4.0-16.0 m/min<br>(157-630 in./min) | 1.5-6.0 kg/h<br>(3.3-13. lb/h)  |
| 1.14 mm<br>(0.045 in.) | 80-240 A  | 15-28 V | 4.0-16.0 m/min<br>(157-630 in./min) | 1.5-6.0 kg/h<br>(3.3-13. lb/h)  |
| 1.2 mm<br>(0.047 in.)  | 100-300 A | 15-29 V | 3.0-14.0 m/min<br>(118-551 in./min) | 1.6-7.5 kg/h<br>(3.5-16. lb/h)  |
| 1.6 mm<br>(1/16 in.)   | 230-375 A | 23-31 V | 5.5-9.0 m/min<br>(217-354 in./min)  | 5.2-8.6 kg/h<br>(11.5-19. lb/h) |