

# OK Autrod 316LSi

A continuous, solid, corrosion-resistant, chromium-nickel-molybdenum wire for welding austenitic stainless alloys of the 18% Cr -8% Ni and 18% Cr -10% Ni -3% Mo types. OK Autrod 316LSi has good general corrosion resistance; in particular, the alloy has very good resistance to corrosion in acid and chlorinated environments. The alloy has a low carbon content which makes it particularly recommended when there is a risk of intergranular corrosion. The higher silicon content improves the welding properties such as wetting. The alloy is widely used in the chemical and food processing industries, as well as in shipbuilding and various types of architectural structure.

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| <b>Classifications Wire Electrode:</b> | SFA/AWS A5.9:ER316LSi, Werkstoffnummer :~1.4430, EN ISO 14343-A:G 19 12 3 L Si                           |
| <b>Approvals:</b>                      | CE EN 13479, VdTÜV 04268, NAKS/HAKC 1.0MM-1.2MM, CWB: AWS A5.9 ER316LSi, DB 43.039.05, DNV NV 316L (M13) |

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

## Typical Tensile Properties

| Condition                               | Yield Strength   | Tensile Strength | Elongation |
|---|------------------|------------------|------------|
| As welded                               | 400 MPa (58 ksi) | 560 MPa (81 ksi) | 37 %       |
| <b>Tested at 350\00B0C (662\00B0F).</b> |                  |                  |            |
| As welded                               | 340 MPa (49 ksi) | 440 MPa (64 ksi) | 26 %       |

## Typical Charpy V-Notch Properties

| Condition | Testing Temperature | Impact Value       |
|-----------|---------------------|--------------------|
| As welded | 20 °C (68 °F)       | 120 J (88.5 ft-lb) |
| As welded | -60 °C (-76 °F)     | 95 J (70 ft-lb)    |
| As welded | -110 °C (-166 °F)   | 70 J (52 ft-lb)    |
| As welded | -196 °C (-321 °F)   | 45 J (33 ft-lb)    |

## Typical Wire Composition %

| C    | Mn  | Si  | Ni   | Cr   | Mo   | Cu   | Ferrite FN |
|------|-----|-----|------|------|------|------|------------|
| 0.01 | 1.8 | 0.9 | 12.2 | 18.4 | 2.60 | 0.12 | 7          |

## Deposition Data

| Diameter          | Current   | Voltage | Wire Feed Speed                      | Deposition Rate                  |
|-------------------|-----------|---------|--------------------------------------|----------------------------------|
| 0.8 mm (.030 in.) | 55-160 A  | 12-24 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 (.035 in.) | 65-220 A  | 15-28 V | 3.5-18.0 m/min<br>(138-709 in./min)  | 1.1-5.4 kg/h<br>(2.4-11.9 lb/h)  |
| 1.0 mm (.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>(3.3-13.2 lb/h)  |
| 1.2 mm (3/64 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>(3.5-16.5 lb/h)  |
| 1.6 mm (1/16 in.) | 230-375 A | 23-31 V | 5.5-9.0 m/min<br>(216.5-354 in./min) | 5.2-8.6 kg/h<br>(11.5-19.0 lb/h) |