

OK Autrod 309Si

A continuous solid corrosion resisting chromium-nickel wire for joining stainless steels to non-alloy or low alloy steels as well as welding of austenitic stainless alloys of 24% Cr, 13% Ni, high C types. OK Autrod 309Si has a good general corrosion resistance. The higher silicon content improves the welding properties such as wetting. When used for joining dissimilar materials the corrosion resistance is of secondary importance.

| | |
|--|--|
| Classifications Wire Electrode: | EN ISO 14343-A:G 22 12 H, SFA/AWS A5.9:ER309Si, Werkstoffnummer :~1.4829 |
|--|--|

Typical Tensile Properties

| Condition | Yield Strength | Tensile Strength | Elongation |
|-----------|------------------|------------------|------------|
| As welded | 440 MPa (64 ksi) | 620 MPa (90 ksi) | 36 % |

Typical Charpy V-Notch Properties

| Condition | Testing Temperature | Impact Value |
|-----------|---------------------|------------------|
| As welded | 20 °C (68 °F) | 100 J (74 ft-lb) |
| As welded | -60 °C (-76 °F) | 80 J (59 ft-lb) |
| As welded | -110 °C (-166 °F) | 60 J (44 ft-lb) |

Typical Wire Composition %

| C | Mn | Si | Ni | Cr | Mo | Cu | Ferrite FN |
|------|-----|-----|------|------|------|------|------------|
| 0.08 | 1.8 | 0.9 | 12.7 | 23.3 | 0.20 | 0.15 | 5 |

Deposition Data

| Diameter | Current | Voltage | Wire Feed Speed | Deposition Rate |
|-------------------|-----------|---------|--------------------------------------|--------------------------------|
| 0.8 mm (.030 in.) | 50-140 A | 16-22 V | 3.4-11 m/min (134-433 in./min) | 0.8-2.7 kg/h (1.8-6.0 lb/h) |
| 1.0 mm (.040 in.) | 80-190 A | 16-24 V | 2.9-8.4 m/min (114-331 in./min) | 1.1-3.1 kg/h (2.4-6.8 lb/h) |
| 1.2 mm (3/64 in.) | 180-280 A | 20-28 V | 4.9-8.5 m/min (193-335 in./min) | 2.6-4.5 kg/h (5.7-9.9 lb/h) |
| 1.6 mm (1/16 in.) | 230-350 A | 24-28 V | 3.2-5.5 m/min (126-216.5 in./min) | 3-5.2 kg/h (6.6-11.5 lb/h) |