

OK Autrod 309LSi

A continuous solid corrosion resistant chromium-nickel wire for welding of similar steels, wrought and cast steels of 23% Cr-12% Ni types. The alloy is also used for welding of buffer layers on CMn steels and welding of dissimilar joints. When using the wire for buffer layers and dissimilar joints it is necessary to control the dilution of the weld. OK Autrod 309LSi has a good general corrosion resistance. The higher silicon content improves the welding properties, such as wetting.

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|---------------------------------------|---|
| Classifications Wire Electrode | SFA/AWS A5.9 : ER309LSi EN ISO 14343-A : G 23 12 L Si |
| Approvals | CE EN 13479 CWB ER309LSi DB 43.039.16 NAKS/HAKC 1.0MM-1.2MM VdTUV 10020 |

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

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|----------------------|---|
| Alloy Type | Austenitic (with approx. 8 % ferrite) 24 % Cr - 13 % Ni - Low C |
| Shielding Gas | M12, M13 (EN ISO 14175) |

Typical Charpy V-Notch Properties

| Condition | Testing Temperature | Impact Value |
|-----------|---------------------|------------------|
| As Welded | 20 °C (68 °F) | 120 J (89 ft-lb) |
| As Welded | -50 °C (-58 °F) | 110 J (81 ft-lb) |

Typical Weld Metal Analysis %

| C | Mn | Si | S | P | Ni | Cr | Mo | Cu | N |
|------|-----|-----|-------|-------|------|----|-----|-----|------|
| 0.02 | 1.8 | 0.7 | 0.003 | 0.015 | 13.5 | 23 | 0.1 | 0.1 | 0.07 |

Typical Weld Metal Analysis %

| Nb | FN WRC-92 |
|------|-----------|
| 0.01 | 7 |

Typical Wire Composition %

| C | Mn | Si | S | P | Ni | Cr | Mo | Cu | N |
|-------|-----|-----|-------|-------|------|------|-----|-----|------|
| 0.016 | 1.9 | 0.7 | 0.004 | 0.019 | 13.7 | 23.3 | 0.1 | 0.1 | 0.09 |

Typical Wire Composition %

| FN WRC-92 |
|-----------|
| 9 |

Deposition Data

| Diameter | Current | Voltage | Wire Feed Speed | Deposition Rate |
|-----------------------|-----------|---------|-------------------------------------|---------------------------------|
| 0.8 mm (0.030 in.) | 55-160 A | 15-24 V | 4.0-17.0 m/min (157-669 in./min) | 1.0-4.1 kg/h (2.2-9.0 lb/h) |
| 0.9 mm (0.035 in.) | 65-220 A | 15-28 V | 3.5-18.0 m/min (138-709 in./min) | 1.1-5.4 kg/h (2.4-11. lb/h) |
| 1.0 mm (0.040 in.) | 80-240 A | 15-28 V | 4.0-16.0 m/min (157-630 in./min) | 1.5-6.0 kg/h (3.3-13. lb/h) |
| 1.2 mm (0.047 in.) | 100-300 A | 15-29 V | 3.0-14.0 m/min (118-551 in./min) | 1.6-7.5 kg/h (3.5-16. lb/h) |
| 1.6 mm (1/16 in.) | 230-375 A | 23-31 V | 5.5-9.0 m/min (217-354 in./min) | 5.2-8.6 kg/h (11.5-19. lb/h) |

Recommended Welding Parameters

| Wire Diameter |
|------------------------|
| 1.14 mm (0.045 in.) |