

OK Autrod 309L

A continuous, solid, corrosion resisting 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 309L has a good general corrosion resistance. When used for joining dissimilar materials the corrosion resistance is of secondary importance.

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|---------------------------------------|---|
| Classifications Wire Electrode | SFA/AWS A5.9 : ER309L EN ISO 14343-A : G 23 12 L |
| Approvals | CE EN 13479 NAKS/HAKC 1.0-1.2 mm |

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

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|----------------------|---|
| Alloy Type | Austenitic (with approx. 9 % 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) | 160 J (118 ft-lb) |
| As Welded | -60 °C (-76 °F) | 130 J (96 ft-lb) |
| As Welded | -110 °C (-166 °F) | 90 J (67 ft-lb) |

Typical Weld Metal Analysis %

| C | Mn | Si | S | P | Ni | Cr | Mo | Cu |
|------|-----|-----|-------|-------|------|------|-----|-----|
| 0.03 | 1.5 | 0.4 | 0.005 | 0.010 | 12.5 | 23.5 | 0.1 | 0.1 |

Typical Wire Composition %

| C | Mn | Si | Ni | Cr | Mo | N | FN WRC-92 |
|------|-----|-----|------|------|------|------|-----------|
| 0.02 | 1.8 | 0.4 | 13.4 | 23.2 | 0.10 | 0.05 | 10 |

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) |