

## OK Tigrod 309L

Bare corrosion resisting chromium-nickel welding rod for welding of similar steels of 24% Cr, 13% 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 Tigrod 309L has a good general corrosion resistance. When used for joining dissimilar materials the corrosion resistance is of secondary importance.

### Specifications

|                        |                                                                   |
|------------------------|-------------------------------------------------------------------|
| <b>Classifications</b> | EN ISO 14343-A : W 23 12 L<br>SFA/AWS A5.9 : ER309L               |
| <b>Approvals</b>       | CE : EN 13479<br>CWB : ER309L<br>UKCA : EN 13479<br>VdTÜV : 10021 |

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

|                      |                                                                  |
|----------------------|------------------------------------------------------------------|
| <b>Alloy Type</b>    | Austenitic (with approx. 10 % ferrite) 24 % Cr - 13 % Ni - Low C |
| <b>Shielding Gas</b> | I1 (EN ISO 14175)                                                |

### Typical Tensile Properties

| Condition | Yield Strength     | Tensile Strength   | Elongation |
|-----------|--------------------|--------------------|------------|
| As Welded | 430 MPa ( 62 ksi ) | 590 MPa ( 86 ksi ) | 32 %       |

### 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 ( 66 ft-lb )   |

### Typical Wire Composition %

| C    | Mn  | Si  | Ni   | Cr   | Mo   | Cu  | N    | FN WRC-92 |
|------|-----|-----|------|------|------|-----|------|-----------|
| 0.02 | 1.8 | 0.4 | 13.4 | 23.2 | 0.10 | 0.1 | 0.05 | 10        |

### Typical Weld Metal Analysis %

| C     | Mn  | Si  | S     | P     | Ni   | Cr   | Mo  | Cu  | N    |
|-------|-----|-----|-------|-------|------|------|-----|-----|------|
| 0.015 | 1.7 | 0.4 | 0.015 | 0.020 | 13.0 | 24.0 | 0.1 | 0.1 | 0.08 |

### Typical Weld Metal Analysis %

| FN WRC-92 |
|-----------|
| 12        |