

## Exaton 309/309L T1

FCAW wire for 22%Cr - 12%Ni stainless steel, For all-position welding. Designed for welding type 309 wrought or cast forms, but used extensively for welding type 304 to mild or carbon steel. Also used for welding 304 clad sheets and for applying stainless steel sheet linings to carbon steel. Carbon content 0.04% maximum.

### Specifications

#### Classifications

SFA/AWS A5.22 : E309LT1-1  
 SFA/AWS A5.22 : E309LT1-4  
 JIS Z 3323 : YF-309LC  
 KS D 3612 : YF-309LC  
 EN ISO 17633-A : T 23 12 L P C1 2  
 EN ISO 17633-A : T 23 12 L P M21 2

#### Welding Current

DC+

#### Alloy Type

C Cr Ni

#### Shielding Gas

M21, C1 (EN ISO 14175)

### Typical Tensile Properties

| Condition                | Yield Strength     | Tensile Strength   | Elongation |
|--------------------------|--------------------|--------------------|------------|
| <b>M21 Shielding Gas</b> |                    |                    |            |
| As Welded                | 480 MPa ( 70 ksi ) | 600 MPa ( 87 ksi ) | 35 %       |
| <b>C1 Shielding gas</b>  |                    |                    |            |
| As Welded                | 392 MPa ( 57 ksi ) | 539 MPa ( 78 ksi ) | 51 %       |

### Typical Charpy V-Notch Properties

| Condition               | Testing Temperature | Impact Value      |
|-------------------------|---------------------|-------------------|
| <b>C1 Shielding gas</b> |                     |                   |
| As Welded               | -196 °C ( -321 °F ) | 18 J ( 13 ft-lb ) |
| As Welded               | -29 °C ( -20 °F )   | 55 J ( 41 ft-lb ) |

### Typical Weld Metal Analysis %

| C                        | Mn   | Si   | S     | P     | Ni   | Cr   |
|--------------------------|------|------|-------|-------|------|------|
| <b>M21 Shielding Gas</b> |      |      |       |       |      |      |
| 0.030                    | 1.30 | 0.90 | 0.007 | 0.024 | 12.5 | 23.5 |
| <b>C1 Shielding gas</b>  |      |      |       |       |      |      |
| 0.029                    | 1.10 | 0.80 | 0.007 | 0.024 | 12.4 | 23.1 |

### Deposition Data

| Diameter                | Current   | Voltage | Wire Feed Speed                       | Deposition Rate                   |
|-------------------------|-----------|---------|---------------------------------------|-----------------------------------|
| 1.2 mm<br>( 0.045 in. ) | 130-220 A | 24-29 V | 5.8-14.4 m/min<br>( 228-567 in./min ) | 1.9-4.6 kg/h<br>( 4.2-10. lbs/h ) |