

Shield-Bright 309L

Shield-Bright 309L is a rutile cored wire designed for the all-positional welding, except vertical down, of stainless steels to carbon or low alloy steels and for the first layer cladding of carbon and low alloy steels with Ar/15-25%CO₂ or CO₂ shielding gas.

Classifications:	AWS A5.22: E309T1-1/T1-4, A5.22: E309LT1-1/T1-4
Approvals:	TUV , ASME IX F No. 6 , MIL-STD-1689 APPLICATIONS-NAVY, ABS-AWS A5.22 E309LT1-1, ASME II SFA 5.22 E309LT1-1/T1-4 , AWS A5.22 E309LT1-1/T1-4, G.L.- AWS A5.22 E309LT1-4, CWB AWS A5.22 E309LT1-1, E309LT1-4

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

Welding Current:	DC+
Alloy Type:	C Cr Ni

Typical Tensile Properties

Condition	Yield Strength	Tensile Strength	Elongation
100% CO₂			
As welded	392 MPa (57 ksi)	539 MPa (78 ksi)	51 %
75% Ar - 25% CO₂			
As welded	480 MPa (70 ksi)	600 MPa (87 ksi)	35 %

Typical Charpy V-Notch Properties

Condition	Testing Temperature	Impact Value
100% CO₂		
As Welded	-29 °C (-20 °F)	55 J (40.5 ft-lb)
As Welded	-196 °C (-321 °F)	18 J (13 ft-lb)

Typical Weld Metal Analysis %

C	Mn	Si	S	P	Ni	Cr
100% CO₂						
0.029	1.10	0.80	0.007	0.024	12.4	23.1
75% Ar - 25% CO₂						
0.030	1.30	0.90	0.007	0.024	12.5	23.5

Deposition Data

Diameter	Current	Voltage	Wire Feed Speed	Deposition Rate
1.2 mm (.045 in.)	130-220 A	24-29 V	5.8-14.4 m/min (228-567 in./min)	1.9-4.6 kg/h (1.2-10.1 lb/h)