

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	SFA/AWS A5.22 : E309LT1-4 SFA/AWS A5.22 : E309LT1-1 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
Approvals	ABS E309LT1-1 ABS E309LT1-4 BV 309L (C1) BV SA 309L (M21) CCS 309L (C1) CE EN 13479 ClassNK KW309LG(C) CWB E 309LT1-1 (C1) CWB E 309LT1-4 (M21) DNV-GL VL 309L (M21) KR RW309LG(C) (C1) LR SS/CMn S CHE(M21 C1) NAKS/HAKC 1.2MM VdTUV 04833 (M20 M21)

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

Welding Current	DC+
Alloy Type	C Cr Ni

Typical Tensile Properties

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

Typical Charpy V-Notch Properties

Condition	Testing Temperature	Impact Value
C1 shielding gas		
As Welded	-29 °C (-20 °F)	55 J (41 ft-lb)
As Welded	-196 °C (-321 °F)	18 J (13 ft-lb)

Typical Weld Metal Analysis %

C	Mn	Si	S	P	Ni	Cr
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 (0.045 in.)	130-220 A	24-29 V	5.8-14.4 m/min (228-567 in./min)	1.9-4.6 kg/h (4-10 lb/h)