

Shield-Bright 309L

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
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 (M21) CWB : E 309LT1-4 (C1) DNV : VL 309L (M21) KR : RW309LG(C) (C1) LR : SS/CMn RS : A-9sp(x8CrNi 24 14) UKCA : EN 13479 VdTÜV : 04833 (M20,M21)

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

Welding Current	DC+
Alloy Type	C Cr Ni
Shielding Gas	M21, C1 (EN ISO 14175)

Typical Tensile Properties			
Condition	Yield Strength	Tensile Strength	Elongation
M21 Shielding Gas			
As Welded	377 MPa	559 MPa	39 %
C1 Shielding Gas			
As Welded	368 MPa	543 MPa	44 %

Typical Charpy V-Notch Properties		
Condition	Testing Temperature	Impact Value
M21 Shielding Gas		
As Welded	-196 °C	15 J
As Welded	-29 °C	45 J
C1 Shielding Gas		
As Welded	-29 °C	55 J
As Welded	-196 °C	18 J

Typical Weld Metal Analysis %						
C	Mn	Si	S	P	Ni	Cr
M21 Shielding Gas						
0.030	1.30	0.90	0.007	0.024	12.5	23.5
C1 Shielding gas						

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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	130-220 A	24-29 V	5.8-14.4 m/min	1.9-4.6 kg/h