

Shield-Bright 316L

Shield-Bright 316L was developed for the welding of Type 316L stainless steel but can be used for other stainless steels including Types 316 and 304L. In a few cases, e.g. nitric acid service, Shield-Bright 316L should not be used to weld 304L. It contains molybdenum which resists pitting corrosion induced by sulphuric and sulphurous acids, chlorides and cellulose solutions. Used widely in the rayon, dye and paper making industries.

Classifications Weld Metal	SFA/AWS A5.22: E316LT1-1 SFA/AWS A5.22: E316LT1-4 JIS Z 3323: TS316L-FB1 KS D 3612: YF 316LC EN ISO 17633-A: T 19 12 3 L P C1 2 EN ISO 17633-A: T 19 12 3 L P M21 2
Approvals	ABS E316LT1-4 (M21) BV 316L (C1) BV SA 316L (M21) CE EN 13479 ClassNK KW316LG(C) CWB E 316LT1-4 (M21) DNV-GL VL 316L (M21, C1) KR RW316LG(C) (C1) LR 316L (C1, M21) NAKS/HAKC 1.2MM RS A-6(xCrNiMo 19 11 3) (C1) VdTUV 04834

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

Welding Current	DC+
Alloy Type	C Cr Ni Mo

Typical Tensile Properties

Condition	Yield Strength	Tensile Strength	Elongation
M21 Shielding Gas			
As Welded	450 MPa	580 MPa	40 %
C1 Shielding Gas			
As Welded	442 MPa	570 MPa	53 %

Typical Charpy V-Notch Properties

Condition	Testing Temperature	Impact Value
C1 shielding gas		
As Welded	-29 °C	60 J
As Welded	-196 °C	26 J

Typical Weld Metal Analysis %

C	Mn	Si	S	P	Ni	Cr	Mo
0.028	1.10	0.80	0.010	0.027	11.8	18.50	2.60

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

