

## 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.

<b>Approvals</b>	ABS E316LT1-1 ABS E316LT1-4 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 S CHE (M21 C1) NAKS/HAKC 1.2MM RS A-6(xCrNiMo 19 11 3) (C1) VdTUV 04834
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Approvals are based on factory location. Please contact ESAB for more information.

<b>Welding Current</b>	DC+
<b>Alloy Type</b>	C Cr Ni Mo
<b>Shielding Gas</b>	M21, C1 (EN ISO 14175)

### Typical Tensile Properties

Condition	Yield Strength	Tensile Strength	Elongation
<b>M21 Shielding Gas</b>			
As Welded	450 MPa (65 ksi)	580 MPa (84 ksi)	40 %
<b>C1 Shielding Gas</b>			
As Welded	442 MPa (64 ksi)	570 MPa (83 ksi)	53 %

### Typical Charpy V-Notch Properties

Condition	Testing Temperature	Impact Value
<b>C1 shielding gas</b>		
As Welded	-29 °C (-20 °F)	60 J (44 ft-lb)
As Welded	-196 °C (-321 °F)	26 J (19 ft-lb)

### 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 (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 (4.2-10. lb/h)