

Shield-Bright 316L

FCAW wire for low carbon 18%Cr - 12%Ni – 2%Mo stainless steel for all-position welding. For welding type 316 stainless. 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. Carbon content 0.04% maximum.

Specifications

Classifications

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

VdTÜV : 04834 (M20,M21)
LR : 316L (C1)
KR : RW316LG(C) (C1)
CWB : AWS A5.22 E316LT1-1, E316LT1-4
ClassNK : KW316LG (C1)
DNV : 316L (C1)
BV : 316L (C1)
ABS : E316LT1-1 (C1)
CE EN : 13479

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

Welding Current

DC+

Alloy Type

C Cr Ni Mo

Shielding Gas

M21, C1 (EN ISO 14175)

Typical Tensile Properties

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

Typical Charpy V-Notch Properties

Condition	Testing Temperature	Impact Value
M21 Shielding Gas		
As Welded	-196 °C (-321 °F)	25 J (19 ft-lb)
As Welded	-29 °C (-20 °F)	52 J (38 ft-lb)
C1 Shielding Gas		
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
M21 Shielding Gas							
0.030	1.20	0.90	0.010	0.027	12.0	18.5	2.70
C1 shielding Gas							
0.028	1.10	0.80	0.010	0.027	11.8	18.50	2.60

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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. lbs/h)