

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.

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

RS : A-6(xCrNiMo 19 11 3) (C1)
NAKS/HAKC : 1.2 mm
LR : 316L (M21)
ABS : E316LT1-1 (C1)
ABS : E316LT1-4 (M21)
BV : 316L (C1)
CE : EN 13479
ClassNK : KW316LG(C) (C1)
CWB : E316LT1-1 (C1)
CWB : E316LT1-4 (M21)
DNV-GL : VL 316L (C1)
DNV-GL : VL 316L (M21)
KR : RW316LG(C) (C1)
LR : 316L (C1)
VdTÜV : 04834 (M20, M21)

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

Welding Current

DC+

Alloy Type

Austenitic Cr-Ni-Mo

Typical Tensile Properties

Condition	Conditional Statement	Yield Strength	Tensile Strength	Elongation
M21 shielding gas				
As Welded	As welded	450 MPa	580 MPa	40 %
C1 shielding gas				
As Welded	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

Typical Weld Metal Analysis %

C	Mn	Si	Ni	Cr	Mo
M21 shielding gas					
0.030	1.20	0.90	12.00	18.50	2.70
C1 shielding gas					
0.028	1.10	0.80	11.80	18.50	2.60

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Deposition Data

Diameter	Current	Voltage
1.6 mm	160-320 A	24-33 V
1.2 mm	130-220 A	24-29 V