



Product Data Sheet

T 'Tubular cored electrode arc welding'

Shield-Bright 316L

Prepared by Daniel Amahatsion	Qualified by Tero Borg	Approved by Neil Farrow	Reg no EN007177	Cancelling EN006788	Reg date 2016-04-01	Page 1 (2)
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REASON FOR ISSUE

Shielding gas amended

GENERAL

Shield-Bright 316L is a rutile cored wire designed for the all-positional welding, except vertical down, of 316 low-carbon type 18-20Cr10-14Ni2-3Mo steels using Ar/15-25%CO₂ or CO₂ shielding gas

Shielding Gas: M21, C1 (EN ISO 14175)

Polarity: DC+

Alloy Type: Austenitic 316L

Fill Type: Rutile

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	E316LT1-1 (C1)
BV	316L (C1)
CE	EN 13479
ClassNK	KW316LG (C1)
CWB	E 316LT1-1 (C1)
CWB	E 316LT1-4 (M21)
DNV	316L (C1)
KR	RW316LG(C) (C1)
LR	316L (C1)
VdTÜV	04834 (M20,M21)

CHEMICAL COMPOSITION

All Weld Metal (%)

	C1 shielding gas	
	Min	Max
C		0.04
Si	0.4	1.0
Mn	1.1	1.8
P		0.030
S		0.025
Cr	17.5	19.5
Ni	11.0	13.0
Mo	2.5	3.0
Cu		0.3

MECHANICAL PROPERTIES OF WELD METAL

All Weld Metal

Properties	C1 Shielding gas	
	As welded	
	Min	Typ
Rp0.2 (MPa)	320	450
Rm (MPa)	580	580
A4 (%)	30	40
Charpy V at -120°C (J)	32	40



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ECONOMICS & CURRENT DATA

Dimension (mm)	Current (A)		W	η	H		Feed			U
$\varnothing$	Min	Max	Nom	Nom	Min	Max	Min	Max	Min	Max
1.2	130	220	20	83	1.9	4.6	5.8	14.4	24	29

W = Gas consumption (l / min)

η = Recovery, g weld metal / 100g wire (%)

H = Deposit rate (kg weld metal / hour arc time)

Feed = Feeding rate (m/min)

U = Arc voltage (V)