



Product Data Sheet

T 'Tubular cored electrode arc welding'

Shield-Bright 316L X-tra

Prepared by Mathankumar M.	Qualified by P-O Oskarsson	Approved by Neil Farrow	Reg no EN007533	Cancelling EN007484	Reg date 2017-04-21	Page 1 (2)
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REASON FOR ISSUE

Addition of mixed gas data

GENERAL

FCAW wire for 18%Cr - 12%Ni – 2%Mo stainless steel For flat and horizontal position welding.

Designed specifically for applications where the service environment can produce pitting corrosion. Commonly used in the pulp and paper industry. Carbon content 0.04% maximum.

Shielding Gas: M21, C1 (EN ISO 14175)

Alloy Type: C Cr Ni Mo

Polarity: DC+

Fill Type: Rutile

CLASSIFICATIONS Weld Metal

SFA/AWS A5.22	E316LT0-1
SFA/AWS A5.22	E316LT0-4
JIS Z 3323	TS316L-FB0 - KR
KS D 3612	YF 316LC - KR
EN ISO 17633-A	T 19 12 3 L R C1 3
EN ISO 17633-A	T 19 12 3 L R M21 3

APPROVALS

ABS	E316LT0-1 (C1)
CE	EN 13479
CWB	E316LT0-1 (C1)
CWB	E316LT0-4 (M21)
DNV-GL	VL 316L
KR	RW316LG (C1)
LR	316L S (C1)
VdTÜV	06612

CHEMICAL COMPOSITION

All Weld Metal (%)

	M21 Shielding Gas		C1 shielding Gas	
	Min	Max	Min	Max
C		0.04		0.04
Si		1.0		1.0
Mn	0.5	2.0	0.5	2.0
P		0.030		0.030
S		0.025		0.025
Cr	17.0	20.0	17.0	20.0
Ni	11.0	13.0	11.0	13.0
Mo	2.5	3.0	2.5	3.0
Cu		0.5		0.5

MECHANICAL PROPERTIES OF WELD METAL

All Weld Metal

Properties	M21 Shielding Gas		C1 Shielding Gas	
	As welded		As welded	
	Min	Typ	Min	Typ
Rp0.2 (MPa)		450		431
Rm (MPa)	485	580	485	565
A4 (%)	30	36	30	37
Charpy V at -29°C (J)				45
Charpy V at -196°C (J)				20



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ECONOMICS & CURRENT DATA

Dimension (mm)	Current (A)		W	η	H		Feed			U
	Min	Max					Min	Max	Min	
$\emptyset$			Nom	Nom	Min	Max				Max
1.2	150	250	20	85	2.5	7.0	8.0	16.0	25	32
1.6	200	350	20	85	3.0	7.5	4.0	11.0	26	34

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)