Product Data Sheet

T 'Tubular cored electrode arc welding'

Shield-Bright 316L

Prepared by	Qualified by	Approved by	Reg no	Cancelling	Reg date	Page
Daniel Amahatsion	P-O Oskarsson	Neil Farrow	EN007532	EN007481	2017-04-21	1 (2)

REASON FOR ISSUE

Addition of mixed gas data

GENERAL

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.

Shielding Gas: M21, C1 (EN ISO 14175)

Polarity: DC+

Alloy Type: C Cr Ni Mo

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)
ABS	E316LT1-4 (M21)
BV	316L (C1)
BV	SA 316L (M21)
CE	EN 13479
ClassNK	KW316LG(C)
CWB	E 316LT1-1 (C1)
CWB	E 316LT1-4 (M21)
DNV	NV 316L (C1)
DNV-GL	VL 316L (M21)
KR	RW316LG(C) (C1)
LR	316L (C1)
VdTÜV	04834

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	0.50	2.0	0.50	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

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MECHANICAL PROPERTIES OF WELD METAL

All Weld Metal

	M21 Shielding Gas		C1 Shielding Gas	
	As welded		As welded	
Properties	**Min**	**Typ**	**Min**	**Typ**
Rp0.2 (MPa)		450		442
Rm (MPa)	485	580	485	570
A4 (%)	30	40	30	53
Charpy V at -29°C (J)				60
Charpy V at -196°C (J)				26

ECONOMICS & CURRENT DATA

Dimension (mm)	Current (A)		W	η	H		Feed		U	
Ø	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)