



Product Data Sheet

T 'Tubular cored electrode arc welding'

OK Tubrod 15.14

Signed by Neil Farrow	Approved by Shaun Studholme/Barbro Karlström	Reg no EN002261	Cancelling PS000013	Reg date 2004-07-01	Page 1 (2)
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GENERAL

A multi-purpose all positional rutile cored wire for use with C1 or M21 shielding gas. Diameters less than 1.4mm are all-positional except vertical down.

Shielding Gas: M21, C1 (EN 439)

Polarity: DC+

Alloy Type: C Mn

Fill Type: Rutile

Diff Hydrogen: < 10 ml/100g

CLASSIFICATIONS Weld Metal

EN 758	T 46 2 P C 2 H10
EN 758	T 46 2 P M 2 H10
SFA/AWS A5.20	E71T-1
SFA/AWS A5.20	E71T-1M

APPROVALS

Ü	42.039/3
ABS	3SA 3YSA (M21 and C1)
BV	SA3YM (M21 and C1)
DB	42.039.05 (M21 and C1)
DNV	IIIYMS (M21 and C1)
DS	T 46 2 P M 2 H10 (M21)
DS	T 46 2 P C 2 H10 (C1)
GL	3YS (M21 and C1)
LR	3S 3YS (M21 and C1)
MoD	MS<25mm, B&BX<12mm (M21 and C1)
RINA	2Y S (C1)
RINA	3Y S (M21)
RS	3S 3YS (M21 and C1)
VdTÜV	07651 (M21 and C1)

CHEMICAL COMPOSITION

All Weld Metal (%)

	C1 Shielding gas		M21 Shielding gas	
	Min	Max	Min	Max
C	0.020	0.080	0.020	0.080
Si	0.30	0.80	0.30	0.80
Mn	1.00	1.50	1.10	1.60
P		0.025		0.025
S		0.025		0.025
Cr		0.20		0.20
Ni		0.50		0.50
Mo		0.20		0.20
V		0.08		0.08
Nb		0.05		0.05
Cu		0.30		0.30



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MECHANICAL PROPERTIES OF WELD METAL

Properties	All Weld Metal		
	C1 Shielding gas		
	EN		
	As welded		
	Min	Max	Typ
ReL (MPa)	460		497
Rm (MPa)	530	660	588
A4-A5 (%)	22		27
Charpy V at -20°C (J)	54		110

Comments:

The hydrogen values are determined in accordance with the method given in ISO 3690. Welding parameters for hydrogen determination: Wire diameter: 1.6mm Shielding gas: M21 Current: 350 amps Voltage: 29 V Stickout: 20mm

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		110	300	20	85	1.3	5.8	3.2	14.5	21	32
1.4		130	320	20	85	1.4	6.3	3.0	12.5	22	32
1.6		150	360	20	85	2.0	6.2	3.0	11.0	24	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)