



Product Data Sheet

OK Tubrod 14.12

T 'Tubular cored electrode arc welding'

Signed by Neil Farrow	Approved by Shaun Studholme/Barbro Karlström	Reg no EN002262	Cancelling PS 000135	Reg date 2004-07-01	Page 1 (2)
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GENERAL

A general purpose metal cored wire for use with M21 or C1 shielding gas. Diameters less than 1.4mm are all-positional.

Shielding Gas: M21, C1 (EN 439)

Polarity: DC+-

Alloy Type: C Mn

Fill Type: Metal cored

Diff Hydrogen: < 10 ml/100g

CLASSIFICATIONS Weld Metal

EN 758	T 42 2 M C 1 H10
EN 758	T 42 2 M M 1 H10
SFA/AWS A5.18	E70C-6C
SFA/AWS A5.18	E70C-6M

APPROVALS

Ü	42.039/3
ABS	3SA,2YSA (M21 & C1)
BV	SA3YM (M21 & C1)
CL	CDS 1227 (M21)
CL	CDS 1186 (C1)
DB	42.039.24 (M21 & C1)
DNV	IIYMS (M21 & C1)
DS	T 42 2 M M 1 H10 (M21)
DS	T 42 2 M C 1 H10 (C1)
GL	3YS (M21 & C1)
LR	3S,3YS (M21 & C1)
RINA	3Y S (M21 & C1)
VdTÜV	06649 (M21 & C1)

CHEMICAL COMPOSITION

All Weld Metal (%)

	M21 shielding gas	
	Min	Max
C	0.04	0.11
Si	0.35	0.85
Mn	1.05	1.65
P		0.025
S		0.025
Cr		0.20
Ni		0.50
Mo		0.20
V		0.08
Nb		0.05
Cu		0.30



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MECHANICAL PROPERTIES OF WELD METAL

All Weld Metal

M21 shielding gas
EN

As welded

Properties	Min	Max	Typ
ReL (MPa)	420		481
Rm (MPa)	510	640	586
A4-A5 (%)	22		27
Charpy V at -20°C (J)	54		96
Charpy V at -29°C (J)	27		

Comments:

The hydrogen values are determined according to the method given in ISO 3690. Welding parameters for hydrogen determination: Wire diameter: 1.6mm Shielding gas: M21 Current: 350 amps Voltage: 31 V Stickout: 25mm

ECONOMICS & CURRENT DATA

Dimension (mm)	Current (A)		W	η	H		Feed		U	
	Min	Max			Nom	Nom	Min	Max	Min	Max
\emptyset										
1.0	80	250	20	95	1.2	4.2	2.5	10.0	14	30
1.2	100	320	20	95	1.3	7.5	1.8	12.0	16	32
1.4	120	380	20	95	1.6	7.5	2.0	9.0	16	34
1.6	140	450	20	95	1.6	8.0	1.5	8.5	18	36

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)