



Product Data Sheet

T "Tubular cored electrode arc welding"

OK Tubrod 15.00

Signed by Neil Farrow	Approved by Shaun Studholme/Barbro Karlström	Reg no EN002298	Cancelling PS000091	Reg date 2004-07-06	Page 1 (2)
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GENERAL

A basic 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: Basic

Diff Hydrogen: < 5 ml/100g

CLASSIFICATIONS Weld Metal

EN 758	T 42 3 B C 2 H5
EN 758	T 42 3 B M 2 H5
SFA/AWS A5.20	E71T-5
SFA/AWS A5.20	E71T-5M

APPROVALS

Ü	42.039/3
CL	CDS 0485 (M21)
DB	42.039.12 (M21and C1)
DNV	IIYMS (M21)
DS	T 42 3 B M 2 H5 (M21)
GL	3YH10S (M21)
LR	3S 3YS H15 (M21)
RINA	3Y S H5 (M21)
RINA	3Y S (C1)
VdTÜV	02181 (M21 and C1)

CHEMICAL COMPOSITION

All Weld Metal (%)

	M21 shielding gas	
	Min	Max
C	0.03	0.10
Si	0.40	0.90
Mn	1.15	1.65
P		0.025
S		0.025
Cr		0.20
Ni		0.20
Mo		0.10
V		0.05
Nb		0.05
Cu		0.10
Al		0.05
Ti		0.05
Pb		0.10
As		0.10
Sb		0.10
B		0.0015
N		0.0100



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MECHANICAL PROPERTIES OF WELD METAL

Properties	All Weld Metal		
	M21 shielding gas EN		
	As welded		
	Min	Max	Typ
ReL (MPa)	420		456
Rm (MPa)	530	640	569
A4-A5 (%)	22		28
Charpy V at -20°C (J)	47		145
Charpy V at -30°C (J)	47		129

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 A, 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	Min	Max
$\emptyset$										
1.0	100	230	20	85	1.2	4.0	4.5	13.0	14	30
1.2	120	300	20	85	1.7	6.5	4.0	15.0	16	32
1.4	130	350	20	85	1.5	7.5	3.0	12.0	16	32
1.6	140	400	20	85	2.0	8.0	3.0	10.5	24	34
2.4	300	500	20	85	3.8	9.5	3.0	6.0	26	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)