



Prepared by Daniel Amahatsion	Qualified by P-O Oskarsson	Approved by Neil Farrow	Reg no EN008681	Cancelling EN007643	Reg date 2019-06-13	Page 1 (2)
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## REASON FOR ISSUE

DB Approval updated.

## 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 ISO 14175)

**Polarity:** DC-

**Alloy Type:** C Mn

**Fill Type:** Basic

**Diff Hydrogen:** < 4 ml/100g

## CLASSIFICATIONS Weld Metal (as welded)

SFA/AWS A5.36 E71T5-M21A2-CS1-H4

## CLASSIFICATIONS Weld Metal

SFA/AWS A5.36 E71T5-C1A2-CS1-H4

EN ISO 17632-A T 42 3 B C1 2 H5

EN ISO 17632-A T 42 3 B M21 2 H5

## APPROVALS

CE EN 13479

DB 42.039.12

DNV III YMS (M21)

GL 3Y H10S

LR 3YS H5 (M21)

RINA 3YS H5 (M21)

VdTÜV 02181

## 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
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, DC negative polarity.

## ECONOMICS & CURRENT DATA

Dimension (mm)	Current (A)		W	$\eta$	H		Feed			U
	Min	Max			Nom	Nom	Min	Max	Min	
$\emptyset$										
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	250	500	20	85	3.5	9.5	1.5	6.0	28	38

**W** = Gas consumption (l / min)

$\eta$  = Recovery, g weld metal / 100g wire (%)

**H** = Deposit rate (kg weld metal / hour arc time)

**Feed** = Feeding rate (m/min)

**U** = Arc voltage (V)