



Product Data Sheet

G 'Gas-shielded metal-arc welding'

OK Autrod 13.28

Prepared by Mats Linde	Qualified by Tero Borg	Approved by Mikael Mimer	Reg no EN007022	Cancelling EN006334	Reg date 2016-02-02	Page 1 (2)
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REASON FOR ISSUE

EN ISO 14341-A upgraded to G 46 6 M21 2Ni2

GENERAL

A copper coated, Ni-alloyed (2,4% Ni), solid wire for GMAW of low-alloyed and low temperature steels in applications such as vessels, pipes and in the offshore industry with a minimum yield strength less than 470 Mpa. The wire provides a good impact toughness down to -60°C.

Shielding Gas: M21 (EN ISO 14175)

Alloy Type: Low alloyed (2.5 % Ni)

CLASSIFICATIONS Weld Metal

EN ISO 14341-A G 46 6 M21 2Ni2

CLASSIFICATIONS Wire Electrode

EN ISO 14341-A G 2Ni2
SFA/AWS A5.28 ER80S-Ni2

APPROVALS

CE EN 13479
DNV V YMS (M21)
NAKS/HAKC
VdTÜV 06852 (RG)

APPROVAL COMMENT

Valid for lotnumbers starting with RG

CHEMICAL COMPOSITION

	All Weld Metal (%)	Wire/Strip (%)	
	Nom	Min	Max
C	0.1	0.07	0.12
Si	0.4	0.40	0.80
Mn	1	0.90	1.25
P	0.01		0.020
S	0.01		0.020
Ni	2.4	2.10	2.70
Mo	0.1		0.15
Cu	0.15		0.35
Al	0.01		0.02
Ti+Zr	0.05		0.15
Others tot			0.50

Comments:
Others tot. according to applicable AWS standard



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MECHANICAL PROPERTIES OF WELD METAL

All Weld Metal

Properties	AWS Ar/1-5O2 (M13) Stress relieved 620°C 1h		EN Ar/20CO2 (M21) As welded		
	Min	Typ	Min	Max	Typ
Rp0.2 (MPa)	470	540	460		540
Rm (MPa)	550	630	530	680	630
A4-A5 (%)	24	29	20		28
Z (%)		28			
Charpy V at 0°C (J)		162			130
Charpy V at -29°C (J)		168			
Charpy V at -40°C (J)					100
Charpy V at -50°C (J)			47		
Charpy V at -60°C (J)					60
Charpy V at -62°C (J)	27	131			
Comments: Preheat and interpass temp. 135-165°C PWHT temp 620 +/- 15°C		Comments:			

ECONOMICS & CURRENT DATA

Dimension (mm)	Current (A)		W	η	H		Feed			U
	Min	Max			Nom	Nom	Min	Max	Min	
\emptyset			Nom	Nom	Min	Max	Min	Max	Min	Max
0.8	40	170	12		0,4	2,6	2	10,8	16	22
1.0	80	280	15		1	5,4	2,7	14,7	18	28
1.2	120	350	18		1,5	6,6	2,7	12,4	20	33

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)