



Product Data Sheet

G 'Gas-shielded metal-arc welding'

OK Autrod 13.13

Signed by Mats Linde	Approved by Per Sundberg/Barbro Karlström	Reg no EN002256	Cancelling EN000622	Reg date 2004-07-01	Page 1 (2)
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REASON FOR ISSUE

Classification weld metal, chemical composition and mechanical properties changed.

GENERAL

A copper coated, low-alloyed, chromium-nickel-molybdenum (0,5% Cr, 0,5% Ni, 0,2% Mo), solid wire for GMAW of high tensile strength steels with a minimum yield strength (0.2 % offset) less than 610 MPa and a tensile strength exceeding 710 MPa. Also suitable when welding steels where a good impact strength at lower temperatures is required.

OK Autrod 13.13 delivered in the unique Esab Octagonal Marathon Pac is excellent in mechanised welding applications.

Shielding Gas: M21 (EN 439)

Alloy Type: Low alloyed (0.5 % Cr, 0.5 % Ni, 0.2 % Mo)

CLASSIFICATIONS Weld Metal

EN 12534 G 55 3 M G Mn3NiCrMo

APPROVALS

Sepros UNA 485179

CLASSIFICATIONS Wire Electrode

EN 12534 G Mn3NiCrMo

SFA/AWS A5.28 ER100S-G

CHEMICAL COMPOSITION

	All Weld Metal (%)	Wire/Strip (%)	
	Nom	Min	Max
	Ar/20CO2		
C	0.11	0.07	0.14
Si	0.5	0.60	0.80
Mn	1.1	1.30	1.80
P	0.015		0.015
S	0.015		0.015
Cr	0.5	0.50	0.65
Ni	0.5	0.50	0.65
Mo	0.2	0.15	0.30
Cu	0.15		0.30
Others total			0.25



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MECHANICAL PROPERTIES OF WELD METAL

Properties	All Weld Metal					
	AWS 80Ar/20CO2 (M21)	EN 80Ar/20CO2 (M21)			EN 80Ar/20CO2 (M21)	EN 80Ar/20CO2 (M21)
	As welded	As welded			Stress relieved+ 620°C 1h	Stress relieved 570°C 1h
	Min	Min	Max	Typ	Typ	Typ
Rp0.2 (MPa)		550		690	660	660
Rm (MPa)	690	640	820	770	750	750
A4-A5 (%)		18		20	24	24
Charpy V at 0°C (J)				80	95	
Charpy V at -20°C (J)				75	70	60
Charpy V at -30°C (J)		47		65	55	
Charpy V at -40°C (J)				60		50
Charpy V at -50°C (J)				50	40	
Charpy V at -60°C (J)				50		35

ECONOMICS & CURRENT DATA

Dimension (mm)	Current (A)		W	η	H		Feed		U	
Ø	Min	Max	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
1.6	225	480	22		3,3	11,6	3,5	12,0	26	38

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)