



Product Data Sheet

G 'Gas-shielded metal-arc welding'

Weld G3Si1

Signed by Mats Linde	Approved by M Bergenstråhle/Christos Skodras	Reg no EN004968	Cancelling EN004853	Reg date 2009-10-07	Page 1 (2)
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GENERAL

A copper coated, G3Si1 solid wire for GMAW of all general structural and engineering unalloyed and low-alloyed carbon-manganese steels. The electrode may be welded with either a gas mixture or with pure CO₂ as the shielding gas.

Shielding Gas: M21, C1 (EN ISO 14175)

Alloy Type: Carbon-manganese steel (Mn/Si-alloyed)

CLASSIFICATIONS Wire

EN ISO 14341-A G3Si1

APPROVALS

CE

EN 13479

CLASSIFICATIONS Weld Metal

EN ISO 14341-A G 38 2 C G3Si1

EN ISO 14341-A G 42 3 M G3Si1

CHEMICAL COMPOSITION

	Wire/Strip (%)	
	Min	Max
C	0.06	0.14
Si	0.70	1.00
Mn	1.30	1.60
P		0.025
S		0.025

MECHANICAL PROPERTIES OF WELD METAL

Properties	All Weld Metal							
	EN 80Ar/20CO ₂ (M21)			EN 80Ar/20CO ₂ (M21)	EN 80Ar/20CO ₂ (M21)	EN CO ₂ (C1)		
	As welded			Normalized 920°C 0.5h	Stress relieved 620°C 15h	As welded		
	Min	Max	Typ	Typ	Typ	Min	Max	Typ
ReL (MPa)	420		470	310	370	380		440
ReH (MPa)			480	320	380			450
Rm (MPa)	500	640	560	455	495	470	600	540
A4-A5 (%)	20		26	32	28	20		25
Z (%)			68	71	73			70
Charpy V at 20°C (J)			130	100	120			110
Charpy V at -20°C (J)			90	75	90	47		70
Charpy V at -30°C (J)	47		70					



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ECONOMICS & CURRENT DATA

Dimension (mm) Ø	Current (A)		W Nom	η Nom	H		Feed			U Max
	Min	Max			Min	Max	Min	Max	Min	
0.8	60	200	14	95	0,8	3	3,2	13	18	24
1.0	80	300	16	96	1	5,6	2,7	15	18	32
1.2	120	380	18	97	1,3	8	2,3	15	18	34

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)