



# Product Data Sheet

G 'Gas-shielded metal-arc welding'

# Purus 46

Prepared by Jose Abal Lopez	Qualified by P-O Oskarsson	Approved by Jose Abal Lopez	Reg no EN007618	Cancelling EN007613	Reg date 2017-09-22	Page 1 (2)
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## GENERAL

A copper coated G4Si1/ER70S-6 solid wire for GMAW of carbon-manganese steels. Purus 46 is particularly suited to be used in general construction, automotive components and mobile machinery industries. It has a slightly higher manganese and silicon content than Purus 42 to increase the weld metal strength. The wire may be welded with either a gas mixture or with pure CO<sub>2</sub> as shielding gas. Purus 46 is designed to give a clean weld bead with a minimum of silica islands and spatter. The wire is suitable for robotic applications at high deposition rates.

**Shielding Gas:** M20, M21, C1 (EN ISO 14175)    **Alloy Type:** Carbon-manganese steel (Mn/Si-alloyed)

## CLASSIFICATIONS Weld Metal

EN ISO 14341-A	G 42 3 C1 4Si1
EN ISO 14341-A	G 46 4 M21 4Si1

## APPROVALS

CE	EN 13479
VdTÜV	19261

## CLASSIFICATIONS Wire Electrode

EN ISO 14341-A	G 4Si1
SFA/AWS A5.18	ER70S-6

## CHEMICAL COMPOSITION

### Wire/Strip (%)

	Min	Max
C	0.06	0.14
Si	0.80	1.15
Mn	1.60	1.85
P		0.025
S		0.025

## MECHANICAL PROPERTIES OF WELD METAL

### All Weld Metal

Properties	EN 80Ar/20CO <sub>2</sub> (M21)			EN CO <sub>2</sub> (C1)			AWS CO <sub>2</sub> (C1)	
	As welded			As welded			As welded	
	Min	Max	Typ	Min	Max	Typ	Min	Typ
Rp0.2 (MPa)			475	420		450	400	450
ReL (MPa)	460		585	500	640	560	480	560
Rm (MPa)	530	680					22	29
A4 (%)			26			26		
A5 (%)	20			20				
Charpy V at 20°C (J)			130			120		
Charpy V at -30°C (J)			70	47		70	27	70
Charpy V at -40°C (J)	47		60					



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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	2.3	3.2	10	18	24
0.9	70	250	15	96	0.9	3.5	3.0	12	18	26
1.0	80	300	16	96	1.0	5.5	2.7	15	18	32
1.14	100	350	17	96	1.2	7.0	2.6	15	18	34
1.2	120	380	18	97	1.3	8.0	2.5	15	18	35
1.32	130	400	18	97	1.5	8.5	2.4	15	19	35
1.4	150	420	19	97	1.6	8.7	2.3	12	22	36
1.6	225	550	20	98	2.1	9.4	2.3	10	28	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)