



# Product Data Sheet

G 'Gas-shielded metal-arc welding'

# Purus 42

Prepared by Jose Abal Lopez	Qualified by P-O Oskarsson	Approved by Jose Abal Lopez	Reg no EN007606	Cancelling EN007544	Reg date 2017-08-29	Page 1 (2)
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## REASON FOR ISSUE

Description updated.

## GENERAL

A copper coated, G3Si1/ER70S-6 solid wire for GMAW of carbon-manganese steels. Purus 42 is particularly suited to be used in general construction, automotive components and mobile machinery industries. The wire may be welded with either a gas mixture or with pure CO<sub>2</sub> as the shielding gas. Purus 42 is designed to give a clean weld bead with a minimum of silica islands and low 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 38 3 C1 3Si1
EN ISO 14341-A	G 42 4 M20 3Si1
EN ISO 14341-A	G 42 4 M21 3Si1

### APPROVALS

CE	EN 13479
CWB	B-G 49A 3 C1 S6 (B-G PV, ZG 49A 3 C G6)
VdTÜV	19190

### CLASSIFICATIONS Wire Electrode

EN ISO 14341-A	G 3Si1
SFA/AWS A5.18	ER70S-6

## CHEMICAL COMPOSITION

### Wire/Strip (%)

	Min	Max
C	0.06	0.14
Si	0.80	1.00
Mn	1.40	1.60
P		0.025
S		0.025

## MECHANICAL PROPERTIES OF WELD METAL

### All Weld Metal

Properties	EN 80Ar 20CO <sub>2</sub>			EN CO <sub>2</sub>			AWS CO <sub>2</sub>	
	As welded			As welded			As welded	
	Min	Max	Typ	Min	Max	Typ	Min	Typ
Rp0.2 (MPa)							400	420
ReL (MPa)	420		470	380		430		
Rm (MPa)	500	640	560	470	600	530	480	530
A4 (%)							22	30
A5 (%)	20		25	20		24		
Charpy V at 20°C (J)			130			110		
Charpy V at -30°C (J)			90	47		75	27	80
Charpy V at -40°C (J)	47		80			65		



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### ECONOMICS & CURRENT DATA

Dimension (mm) Ø	Current (A)		W Nom	η Nom	H		Feed			U	
	Min	Max			Min	Max	Min	Max	Min	Max	
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)