Certified Quality System

GMAW welding wire for mild steels

SIDERGAS S6

Copper or bronze coated solid wire for the GMAW of mild steels under both Ar/CO_2 mixed gas and pure CO_2 shielding gas. It is used in structural steel engineering.

Standards:	**EN ISO 14341-A:21(*)**	**AWS A5.18:21**	**CSA W48:18**
Classification:	**G 42 4 M21 3Si1/ G 42 4 C1 3Si1**	**ER70S-6**	**B-G 49A 5 C1 S6**

(*) Wire electrode classified to the system based upon the yield strength and the average impact energy of 47 J of all-weld metal in accordance with EN ISO 14341-A:21

CHEMICAL COMPOSITION OF THE WIRE (wt.-%)

	Sidergas		EN ISO		AWS		CSA	
elements	**min.**	**max.**	min.	max.	min.	max.	min.	max.
C	**0,06**	**0,08**	0,06	0,14	0,06	0,15	0,06	0,14
Mn	**1,40**	**1,50**	1,30	1,60	1,40	1,85	1,30	1,60
Si	**0,80**	**0,90**	0,70	1,00	0,80	1,15	0,70	1,00
P	**-**	**0,02**		0,025		0,025		0,025
S	**-**	**0,02**	-	0,025	-	0,035	-	0,025
Cu	**-**	**0,30**	-	0,35	-	0,50	-	0,35
Mo	**-**	**0,10**	-	0,15	-	0,15	-	0,15
Ni	**-**	**0,10**	-	0,15	-	0,15	-	0,15
Ti+Zr	**-**	**0,03**	-	0,15	-	-	-	0,15
Al	**-**	**0,02**	-	0,02	-	-	-	0,02
Cr	**-**	**0,15**	-	0,15	-	0,15	-	0,15
V	**-**	**0,015**	-	0,03	-	0,03	-	0,03

MECHANICAL PROPERTIES OF ALL-WELD METAL

	Sidergas	EN ISO	AWS	CSA
	typical values (*)	minimum values	minimum values	-
Tensile strength (Rm)	**560 [MPa]**	500 [MPa]	480 [MPa]	500 [MPa]
Yield strength (Rp0,2)	**460 [MPa]**	420 [MPa]	400 [MPa]	420 [MPa]
Elongation (A%)	**30 (L_o=5d_o)**	20 (L_o=5d_o)	22 (L_0=2")	20 (L_o=5d_o)
Impact work (ISO-V KV)	**80 [J] @ -20°C** **60 [J] @ -40°C**	47 [J] @ -40°C C1/M21	27 [J] @ -29°C	47 [J] @ -50°C C1

(*) Typical values are referred to EN ISO 14175 M21 (80% Ar, 20% CO_2), as shielding gas, in the as-welded condition using an all-weld metal test assembly type 1.3 in accordance with EN ISO 15792-1:21, using a 1,20 mm diameter wire electrode under welding conditions specified in § 5.1 and 5.2 of EN ISO 14341-A:21. *Test results should not be assumed to be expected results in a particular application or weldment.*

PRODUCT APPROVALS

SHIELDING GAS (EN ISO 14175):	CWB	ABS	LR	Vd-TÜV	DB	DNVGL	RINA	BV	CE
	C1	M21	C1 M21	C M2,M3	C1 M2, M3	M21	M21	M21	according to EN 13479:17and Regulation (UE) No. 305/2011
GRADE:	-	3YSA	D BF 3YS H15 NA	group 1.2	group 1.2	4Y	3Y S	4YM	

OPERATING DATA

welding positions:  PA, PB, PC, PD, PE, PF, PG

type of current and polarity: = + D.C. +

BASE MATERIALS

Suitable for steels with yield strength of up to 420 MPa.

Non alloy structural steels:	EN 10025-2 up to S355
Steels for pressure purposes:	EN 10028-2 up to P355GH
	EN 10028-3 up to P355NH
Fine grain structural steels:	EN 10025-3 up to S460NL
	EN 10025-4 up to S460ML
Steels for pipelines:	EN ISO 3183 up to L415M/N L360QB; API5L up to X60
	EN 10217-1 up to P355N
	EN 10216-1 up to P275T1

TECHNICAL DELIVERY CONDITIONS

The technical delivery conditions (type of product, dimensions, tolerance and marking) are in accordance with EN ISO 544:18 and EN ISO 14344:10.

PACKAGING AND AVAILABLE SIZES

mm	in	D-100 plastic	D-200 plastic	D-300 plastic	K-300 wire basket	KS-300 wire basket	DRUM280	MIDIPAC150 /300	SUPERPAC450 /550	MASTERPAC1200
0.60	.023	X	X	X						
0.80	.030	X	X	X	X	X	X	X	X	
0.90	.035	X	X	X	X	X	X	X	X	
1.00	.040	X	X	X	X	X	X	X	X	
1.14	.045	X	X	X	X	X	X	X	X	
1.20			X	X	X	X	X	X	X	X
1.30	.052			X	X	X	X	X	X	X
1.40	.055			X	X	X	X	X	X	X
1.60	1/16			X	X	X		X	X	X
2.00									X	X

SIDERGAS S.P.A.
37015 S. AMBROGIO VALP. (VR) - ITALY
VIALE RIMEMBRANZA # 17 – phone + 39 045 6862044
telefax +39 045 6861048 – web www.sidergas.com