



Certified Quality System

GMAW welding wire
for mild steels**SIDERGAS S7**

Copper or bronze coated solid wire for the GMAW of mild steels, with higher Manganese and Silicon content to increase deoxidation and mechanical properties. Superior smooth weld bead appearance even at high welding parameters. To be used with both Ar/CO₂ mixed gas and pure CO₂ shielding gas.

Standards:	EN ISO 14341-A:21(*)	AWS A5.18:21	CSA W48:18
Classification:	G 46 5 M21 4Si1/ G 46 4 C1 4Si1	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.-%)

elements	Sidergas		EN ISO		AWS		CSA	
	min.	max.	min.	max.	min.	max.	min.	max.
C	0,065	0,08	0,06	0,14	0,06	0,15	0,06	0,14
Mn	1,60	1,70	1,60	1,90	1,40	1,85	1,60	1,90
Si	0,90	1,00	0,80	1,20	0,80	1,15	0,80	1,20
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)	600 [MPa]	530 [MPa]	480 [MPa]	530 [MPa]
Yield strength (Rp0,2)	500 [MPa]	460 [MPa]	400 [MPa]	460 [MPa]
Elongation (A%)	26 (L ₀ =5d ₀)	20 (L ₀ =5d ₀)	22 (L ₀ =2")	20 (L ₀ =5d ₀)
Impact work (ISO-V KV)	80 [J] @ -20°C 50 [J] @ -50°C	47 [J] @ -50°C M21	27 [J] @ -29°C	47 [J] @ -50°C C1

(*) Typical values are referred to EN ISO 14175 M21 (80% Ar, 20% CO₂) 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 GASES (EN ISO 14175):	ABS	LR	Vd-TÜV	DB	DNVGL	GOST-R	RINA	CE
	M21	M21	M2	C1 M2, M3	M21	-	M21	
GRADING	3Y	DXVu O BF 4YS H15 NA	group 3.1	group 1.2	4Y40S	-	4YS	according to EN 13479:17 and Regulation (UE) No. 305/2011

OPERATING DATA

welding positions:		PA, PB, PC, PD, PE, PF, PG	type of current and polarity:	
--------------------	--	-------------------------------	-------------------------------	--

BASE MATERIALS

Suitable for steels with yield strength of up to 460 MPa.

Non alloy structural steels:

Steels for pressure purposes:

Fine grain structural steels:

Steels for pipelines:

EN 10025-2 up to S355

EN 10028-2 up to P355GH

EN 10028-3 up to P355NH

EN 10025-3 up to S460NL

EN 10025-4 up to S460ML

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
0.80	.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