



Certified Quality System

GTAW rods
for mild steels

SIDERGAS TS7

Copper coated solid rod for the GTAW of mild steels, with higher Manganese and Silicon content, to increase deoxidation and mechanical properties. Superior weld bead appearance. It is used in general construction, pressure vessel fabrication, pipeline constructions and shipbuilding. To be used with gas EN ISO 14175-11 (Ar 100%).

Standards: **EN ISO 636-A:17(*)** **AWS A5.18:21**
Classification: **W 46 5 4Si1** **ER70S-6**

(*) Rod 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 636-A:17.

CHEMICAL COMPOSITION OF ROD (wt.-%)

elements	Sidergas		EN ISO		AWS	
	min.	max.	min.	max.	min.	max.
C	0,065	0,08	0,06	0,14	0,06	0,15
Mn	1,60	1,70	1,60	1,90	1,40	1,85
Si	0,90	1,00	0,80	1,20	0,80	1,15
P	-	0,02	-	0,025	-	0,025
S	-	0,02	-	0,025	-	0,035
Cu	-	0,30	-	-	-	0,50
Mo	-	0,10	-	0,15	-	0,15
Ni	-	0,10	-	0,15	-	0,15
Ti+Zr	-	0,03	-	0,15	-	-
Al	-	0,02	-	0,02	-	-
Cr	-	0,15	-	0,15	-	0,15
V	-	0,015	-	0,03	-	0,03

MECHANICAL PROPERTIES OF ALL-WELD METAL



	Sidergas	EN ISO	AWS
	typical values (*)	minimum values	minimum values
Tensile strength (Rm)	600 [MPa]	500 [MPa]	480 [MPa]
Yield strength (Rp0,2)	530 [MPa]	420 [MPa]	400 [MPa]
Elongation (A%)	25 (L ₀ =5d ₀)	20 (L ₀ =5d ₀)	22 (L ₀ =2")
Impact work (ISO-V KV)	100 [J] @ -20°C 50 [J] @ -50°C	47 [J] @ -50°C	27 [J] @ -29°C

(*) Typical values are referred to EN ISO 14175 11 (Ar) 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 2,40 mm diameter rod and welding conditions specified in § 5.1 and 5.2 of EN ISO 636-A:17. *Test results should not be assumed to be expected results in a particular application or weldment.*

PRODUCT APPROVALS

	CE
SHIELDING GASES (EN ISO 14175):	according to EN 13479:17 and Regulation (UE) No. 305/2011
GRADING:	

OPERATING DATA

welding positions:	 PA, PB, PC, PE, PF	type of current and polarity:	 D.C. -
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BASE MATERIALS

Suitable for steels with yield strength of up to 460 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 P460NH
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 P460N 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

Diameter mm.	Length mm.	tube weight kg.	box weight kg.
1,60	1.000	5	20 (4 tubes into a box)
2,00	1.000	5	20 (4 tubes into a box)
2,40	1.000	5	20 (4 tubes into a box)
3,20	1.000	5	20 (4 tubes into a box)

Sidergas

STEEL GTAW

SIDERGAS S.R.L.

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