



Copper coated solid rod for the GTAW of mild steels. It is used in general construction, pressure vessel fabrication, pipeline constructions and shipbuilding. It is generally used for the root pass. To be used with gas EN ISO 14175-11 (Ar 100%).

Standards:	EN ISO 636-A:17(*)	AWS A5.18:21
Classification:	W 42 5 3Si	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	0,06	0,08	0,06	0,14	0,06	0,15
Mn	1,40	1,50	1,30	1,60	1,40	1,85
Si	0,80	0,90	0,70	1,00	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)	590 [MPa]	500 [MPa]	480 [MPa]
Yield strength (Rp0,2)	540 [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)	84 [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 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 EN 10025-3 up to S420NL EN 10025-4 up to S420ML
Fine grain structural steels:	EN ISO 3183 up to a L415M/N L360QB; API5L up to X60
Steels for pipelines:	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

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)