



DATA SHEET
DS 007
Rev. 04 dd 10/03/09
INEFIL 19.12

I.N.E. S.p.A.
Via Facca 10
35013 Cittadella (PADOVA)
ITALY
Tel. : +39 049/9481111 Fax: + 39 049/9400249
Internet: www.ine.it E mail: ine@ine.it

CLASSIFICATION

AWS SPECIFICATIONS	EN SPECIFICATIONS
AWS A 5.18: ER70S-6	EN ISO 14341-A: G 46 4 M G4Si1
	EN ISO 14341-A: G 42 3 C G4Si1

APPROVALS

DB	TÜV	RINA
GL		

ALLOY TYPE

Copper-coated solid wire for welding carbon and C-Mn steels with tensile strength up to 510 MPa.

APPLICATIONS

Copper-coated solid wire designed for welding carbon and carbon-manganese steels with tensile strength up to 510 MPa. Suitable for single pass or multi-pass welding. Applications include tanks, boilers, steel structural works, earthworks and construction works. The higher silicon-manganese content improves high mechanic characteristics and gives better deposit. To be used under the shield of Ar+CO₂ or CO₂.

MATERIALS TO BE WELDED

ASTM		EN		Others
A139	A131 Gr A, B, D	10113-2 S275	10113-3 S420M	Fe 360
A210 Gr A1	API 5LX42	10113-2 S355	10113-3 S420ML	Fe 430
A210 Gr C	API 5LX46	10113-2 S420	10025 S185, S235	Fe 510
A36	API 5LX52	10113-3 S275M	10025 S275, S355	(steel group 1
A234 Gr WPB	API 5LX60	10113-3 S275ML	10208-1 L210, L240	EN 288/3)
A334 Gr 1		10113-3 S355M	10208-1 L290, L360	
A106 Gr A, B, C		10113-3 S355ML		

WELDING GUIDELINES

Preheat and PWHT are not required.

TECHNICAL INFORMATION

Gas: CO₂ & Mix Ar- CO₂ (EN ISO 14175)
Welding position: all positions



WELDING PARAMETERS

Current	DC + Reverse polarity					
Diameter (mm)	0.8	1.0	1.2	1.6		
Volts (V)	16 ÷ 28	17 ÷ 32	18 ÷ 34	19 ÷ 38		
Intensity (A)	60 ÷ 200	80 ÷ 260	100 ÷ 360	130 ÷ 450		



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TYPICAL CHEMICAL COMPOSITION OF WIRE

C %	Mn %	Si %	S %	P %	Cu %	Ni %	Cr %	Mo %	
0.08	1.70	0.90	0.012	0.012	0.15	-	-	-	

TYPICAL MECHANICAL PROPERTIES

GAS		Yield strength	Tensile strength	Elongation on % 5d	Impact energy (Charpy V)				
		Rs	Rm	A 5d	+ 20°C	0°C	-20°C	-40°C	-60°C
		(MPa)	(MPa)	%	(Joule)	(Joule)	(Joule)	(Joule)	(Joule)
MIX	as welded	510	580	26	140	-	100	70	-

PRODUCTS AVAILABLE

Process	Product	Classification AWS	Classification EN
MIG/MAG Solid wire	INEFIL S2	AWS A 5.18: ER70S-2	EN 14341-A: G2Ti
	INEFIL 13.7	AWS A 5.18: ER70S-3	EN 14341-A: G2Si
	INEFIL S4	AWS A 5.18: ER70S-4	EN 14341-A: G3Si1
	INEFIL	AWS A 5.18: ER70S-6	EN 14341-A: G3Si1
	INE SPEEDFIL	AWS A 5.18: ER70S-6	EN 14341-A: G3Si1
	INEFIL NR	AWS A 5.18: ER70S-6	EN 14341-A: G3Si1
	INEFIL 19.12 NR	AWS A 5.18: ER70S-6	EN 14341-A: G4Si1
TIG Rods	INETIG S2	AWS A 5.18: ER70S-2	EN 636-A: W2Ti
	INETIG 13.7	AWS A 5.18: ER70S-3	EN 636-A: W2Si
	INETIG	AWS A 5.18: ER70S-6	EN 636-A: W3Si1
SAW Submerged arc	INESUB S2	AWS A 5.17: EM12	EN 14171-A: S2
	INESUB S2Si	AWS A 5.17: EM12K	EN 14171-A: S2Si
	INESUB S3Si	AWS A 5.17: EH12K	EN 14171-A S3Si
FCAW Cored wire	INETUB R71T1	AWS A 5.20: E71T-1	EN 17632-A: T 46 2 P M
	INETUB R70T1	AWS A 5.20: E70T-1	EN 17632-A: T 42 2 R M
	INETUB R71T1-CO2	AWS A 5.20: E71T-1	EN 17632-A: T 46 2 P C
	INETUB M71TG	AWS A 5.18: E70C-6MH4	EN 17632-A: T 46 2 M M
	INETUB B71T5	AWS A 5.20: E71T-5	EN 17632-A: T 46 4 B M
SMAW Electrodes	INE 50 B	AWS A 5.1: E7018	EN 2560-A: E 42 4 B
	INE 55 B	AWS A 5.1: E7018-1	EN 2560-A: E 42 4 B