



**DATA SHEET**  
**DS 010**  
**Rev. 02 dd 10/03/09**  
**INEFIL NR**

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](http://www.ine.it) E mail: [ine@ine.it](mailto:ine@ine.it)

**CLASSIFICATION**

AWS SPECIFICATIONS	EN SPECIFICATIONS
AWS A 5.18: ER70S-6	EN ISO 14341-A: G 46 4 M G3Si1
	EN ISO 14341-A: G 42 2 C G3Si1

**APPROVALS**

ABS	TÜV	RINA
LRS	DNV	DB

**ALLOY TYPE**

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

**APPLICATIONS**

A non-copper-coated solid wire designed for welding carbon and carbon-manganese steels with tensile strength up to 510 MPa. Suitable for single or multi-pass welding. Applications include tanks, boilers, steel structural works, earthworks and construction works. Manufactured from first choice wire rod with very low content of phosphorus and sulphur impurities, it is produced with an innovative system which considerably improves wire feeding in the torch liners, thus reducing the need for torch spares. No vibrations at all, very limited spattering, smooth and good-looking weld beads. Suitable for semiautomatic, automatic and robot welding, especially in those applications in which welding parameters are high. To be used under the shield of Ar+CO<sub>2</sub> or CO<sub>2</sub>.

**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: CO<sub>2</sub> & Mix Ar- CO<sub>2</sub> (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 %	
0.07	1.40	0.80	0.012	0.012	0.03	-	-	-	

**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)
<b>MIX</b>	as welded	470	560	26	150	-	90	60	-

**PRODUCTS AVAILABLE**

Process	Product	Classification AWS	Classification EN
<b>MIG/MAG</b> 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 19.12	AWS A 5.18: ER70S-6	EN 14341-A: G4Si1
	INEFIL SPEEDFIL	AWS A 5.18: ER70S-6	EN 14341-A: G3Si1
	INEFIL	AWS A 5.18: ER70S-6	EN 14341-A: G3Si1
	INEFIL 19.12 NR	AWS A 5.18: ER70S-6	EN 14341-A: G4Si1
<b>TIG</b> 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
<b>SAW</b> Submerged arc	INESUB S2	AWS A 5.17: EM12	EN 756: S 2
	INESUB S2Si	AWS A 5.17: EM12K	EN 756: S 2Si
	INESUB S3Si	AWS A 5.17: EH12K	EN 756 S 3Si
<b>FCAW</b> Cored wire	INETUB R71T1	AWS A 5.20: E71T1	EN 17632-A: T 46 2 P M 1 H5
	INETUB R70T1	AWS A 5.20: E70T1	EN 17632-A: T 42 2 R M 3 H5
	INETUB R71T1-CO2	AWS A 5.20: E71T1	EN 17632-A: T 46 2 P C 1 H5
	INETUB M71TG	AWS A 5.18: E70C-6MH4	EN 17632-A: T 42 2 M M 1 H5
	INETUB B71T5	AWS A 5.20: E71T5	EN 17632-A: T 46 4 B M H5
<b>SMAW</b> Electrodes	INE 50 B	AWS A 5.1: E7018	EN 2560-A: E 42 4 B 42 H5
	INE 55 B	AWS A 5.1: E7018-1	EN 2560-A: E 42 4 B 42 H5