



DATA SHEET
DS 005
Rev. 06 dd 23/07/2014
INEFIL TITAN 1
(BRONZED)

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**APPROVALS**

AWS SPECIFICATIONS	EN SPECIFICATIONS
AWS A 5.18: ER70S-G	
AWS A 5.18M: ER48S-G	
ASME SFA 5.18: ER70S-G	
ASME SFA 5.18M: ER48S-G	

ALLOY TYPE

Bronze-coated solid wire for welding carbon and C-Mn steels.

APPLICATIONS

Bronze-coated solid wire designed for welding carbon and carbon-manganese steels with tensile strength up to 510 MPa. Suitable as well for welding thin, galvanised or electro-galvanised plates; very limited spattering thanks to the addition of titanium and zirconium. The fusion allows the degassing of zinc vapours, which prevents the formation of blows and pores in the weld bead. 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 EN 288/3)
A234 Gr WPB	API 5LX60	10113-3 S275ML	10208-1 L210, L240	
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)	0.6	0.8	0.9	1.0	1.2
Volts (V)		15 ÷ 26	16 ÷ 28	16 ÷ 30	17 ÷ 32	18 ÷ 34
Intensity (A)		50 ÷ 180	60 ÷ 200	70 ÷ 230	80 ÷ 260	100 ÷ 360



DATA SHEET
DS 005
Rev. 06 dd 23/07/2014
INEFIL TITAN 1
(BRONZED)

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

TYPICAL CHEMICAL COMPOSITION OF WIRE

C %	Mn %	Si %	S %	P %	Cu %	Ti %	Zr %	Al %	
*	*	*	*	*	*	*	*	*	

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	440	520	28	130	-	70	-	-

PRODUCTS AVAILABLE

Process	Product	Classification AWS	Classification EN
MIG/MAG Solid wire	INEFIL S2	AWS A 5.18: ER70S-2	EN 14341-A: G 2Ti
TIG Rods	INETIG S2	AWS A 5.18: ER70S-2	EN 636-A: W2Ti
SAW Submerged arc			
FCAW Cored wire	INETUB ZN	AWS A 5.20: E71T-GS	EN 17632-A: T 42 Z Z M
SMAW Electrodes			