



DATA SHEET
DS 107
Rev. 04 dd 10/03/09
INETIG B3

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 5.28: ER90S-B3	EN ISO 21952-B: W 2C1M

APPROVALS

TÜV		

ALLOY TYPE

2.25Cr-1Mo content to be used for the welding of creep resistant steel.

APPLICATIONS

Low alloy copper-coated tig rod with 2.25% Cr and 1% Mo content to be used for the welding of creep resistant steel. Chemical composition of rod conforming to AWS specification. It is used in chemical industry and in the ammonia synthesis process, for heat exchangers, boilers, piping and pressure vessels for temperature service up to about 600°C. It will also find applications in the petro-chemical industries, suitable for facing on casting and for casting repairs.

MATERIALS TO BE WELDED

ASTM		EN		Others
A387 Gr 21&22	A200 T21, T22	10222-2 12CrMo 9 10	(BS 1503 Gr 622)	
A182 F22	A213 T22	10028-2 10CrMo9-10	(BS 1504 Gr 622)	
A217 WC9	A335 P22	(GS-18CrMo9 10)	(BS 3100 Gr B3)	
A234 WP22	A199 T21, T22	(DIN 11CrMo9-10)	(BS 3604 Gr 622)	
		(DIN 6CrMo9 10)	(BS 3059 Gr 622/640)	
		(DIN 12CrMo 9 10)	(BS 3059 Gr 622/490)	
		(BS 1501 Gr 622)		

WELDING GUIDELINES

Preheat and interpass temperature 200°C. PWHT at 690°C for an hour.

TECHNICAL INFORMATION

Gas: Argon 100% (EN ISO 14175)
Welding positions: all positions



WELDING PARAMETERS

Current	DC - Straight polarity
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PACKAGING DATA

Diameter (mm)	1.2	1.6	2.0	2.4	3.2	4.0
Length (mm)	1000	1000	1000	1000	1000	1000
Carton	5/25 Kg	5/25 Kg	5/25 Kg	5/25 Kg	5/25 Kg	5/25 Kg

* tolerances according to EN ISO 544 specification.



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TYPICAL CHEMICAL COMPOSITION OF WIRE

C %	Mn %	Si %	S %	P %	Cr %	Ni %	Mo %	Cu %	
0.08	0.60	0.60	0.010	0.010	2.50	-	1.0	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)
Argon	after PWHT	570	650	22	230	-	-	-	-

PRODUCTS AVAILABLE

Process	Product	Classification AWS	Classification EN
MIG/MAG Solid wire	INEFIL B3	AWS A 5.28: ER90S-B3	EN 21952-B: G 2C1M
	INEFIL CROMO 2	AWS A 5.28: ER90S-G	EN 21952-A: G CrMo2Si
	INEFIL B3 L	AWS A 5.28: ER80S-B3L	EN 21952-B: G 2C1ML
TIG Rods	INETIG CROMO 2	AWS A 5.28: ER90S-G	EN 21952-A: W CrMo2Si
	INETIG B3 L	AWS A 5.28: ER80S-B3L	EN 21952-B: W 2C1ML
SAW Submerged arc	INESUB EB3	AWS A 5.23: EB3	EN 24598-A: S CrMo2
	INESUB EB3R	AWS A 5.23: EB3R	EN 24598-A: S CrMo2
FCAW Cored wire	INETUB B91T5-B3	AWS A 5.29: E91T5-B3	
	INETUB M91TG-B3	AWS A 5.29: E91TG-B3	
	INETUB R91T1-B3	AWS A 5.29: E91T1-B3	
SMAW Electrodes	INE B3	AWS A 5.5: E 9018-B3	EN 3580-A: E CrMo2
	INE B3 L	AWS A 5.5: E 8018-B3L	EN 3580-A: E CrMo2L