



**DATA SHEET**  
**DS 060**  
**Rev. 6 dd 13/05/2015**  
**INEFIL B2**

I.N.E. S.p.A.  
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**CLASSIFICATION**

AWS SPECIFICATIONS	EN SPECIFICATIONS
AWS A 5.28: ER80S-B2	EN ISO 21952-B: G 55 M22 1CM
AWS A 5.28M: ER55S-B2	
ASME SFA 5.28: ER80S-B2	
ASME SFA 5.28M: ER55S-B2	

**APPROVALS**

TÜV		

**ALLOY TYPE**

1.25Cr-0.5Mo content to be used for the welding of creep resistant steel.

**APPLICATIONS**

Low alloy copper-coated solid wire with 1.25% Cr and 0.5% Mo content to be used for the welding of creep resistant steel. Chemical composition of wire 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 550°C. It will also find applications in the petro-chemical industries, suitable for facing on casting and for casting repairs. To be used under the shield of Ar+O<sub>2</sub>.

**MATERIALS TO BE WELDED**

ASTM		EN		Others
A387 Gr 11&12	A200 T11	10028-2 13CrMo 4-5	(BS 1501 Gr 620 & 621)	
A182 F11 & F12	A213 T11 & T12	10083-1 25CrMo4	(BS 1502 Gr 620)	
A217 WC6 & WC11	A335 P11 & P12	10222-2 14CrMo 4-5	(BS 1503 Gr 620 & 621)	
A234 WP11 & WP12		(DIN 17210 16MnCr5)	(BS 1504 Gr 621)	
A199 T11		(DIN 13CrMo 4-4)	(BS 3100 Gr B2)	
		(DIN 16CrMo4-4)	(BS 3604 Gr 620/440)	
		(DIN 11CrMo 5-5)	(BS 3059 Gr 620/460)	

**WELDING GUIDELINES**

Preheat and interpass temperature 150°C. PWHT at 620°C for an hour.

**TECHNICAL INFORMATION**

Gas: Mix Ar- O<sub>2</sub> (EN ISO 14175)  
Welding positions: all positions



**WELDING PARAMETERS**

Current	DC + Reverse polarity				
	0.8	1.0	1.2	1.6	
Diameter (mm)					
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 %	Cr %	Ni %	Mo %	Cu %	
0.08	0.60	0.60	0.010	0.010	1.30	-	0.50	0.12	

**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>M22</b>	after PWHT	480	570	21	150	-	-	-	-

**PRODUCTS AVAILABLE**

Process	Product	Classification AWS	Classification EN
<b>MIG/MAG</b> Solid wire	INEFIL CROMO 1	AWS A 5.28: ER80S-G	EN 21952-A: G CrMo1Si
	INEFIL B2 L	AWS A 5.28: ER70S-B2L	EN 21952-B: G 1CML
<b>TIG</b> Rods	INETIG B2	AWS A 5.28: ER80S-B2	EN 21952-B: W 1CM
	INETIG B2 L	AWS A 5.28:ER70S-B2L	EN 21952-B: W 1CML
	INETIG CROMO 1	AWS A 5.28: ER80S-G	EN 21952-A: W CrMo1Si
<b>SAW</b> Submerged arc	INESUB EB2	AWS A 5.23: EB2	EN 24598-A: S CrMo1
	INESUB EB2R	AWS A 5.23: EB2R	EN 24598-A: S CrMo1
<b>FCAW</b> Cored wire	INETUB B81T5-B2	AWS A 5.29: E81T5-B2	EN 17634-A: T CrMo1
	INETUB M81TG-B2	AWS A 5.28: E80C-B2	EN 17634-A: T CrMo1
	INETUB R81T1-B2	AWS A 5.29: E81T1-B2	EN 17634-A: T CrMo1
<b>SMAW</b> Electrodes	INE B2	AWS A 5.5: E8018-B2	EN 3580-A: E CrMo1
	INE B2 L	AWS A 5.5: E7018-B2L	EN 3580-A: E CrMo1L