



**DATA SHEET**  
**DS 261**  
**Rev. 05 dd 12/09/2013**  
**INESUB EB3**

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

**CLASSIFICATION**

**APPROVALS**

AWS SPECIFICATIONS	EN SPECIFICATIONS
AWS A 5.23: EB3	EN ISO 24598-A: S CrMo2
AWS A 5.23M: EB3	
ASME SFA 5.23: EB3	
ASME SFA 5.23M: EB3	

TÜV		

**ALLOY TYPE**

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

**APPLICATIONS**

Copper-coated solid wire for submerged arc welding with 2.25% Cr and 1% Mo, content to be used for the welding of creep resistant steel. 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 600°C. It will also find applications in the petro-chemical industries, suitable for facing on casting and for casting repairs. To be used with basic fluxes.

**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 10CrMo 9-10	(BS 1504 Gr 622)	
A217 WC9	A335 P22	(GS-18CrMo 9-10)	(BS 3100 Gr B3)	
A234 WP22	A199 T21, T22	(DIN 11CrMo 9-10)	(BS 3604 Gr 622)	
		(DIN 6CrMo 9-10)	(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 ÷ 250°C. PWHT at 690°C for an hour.

**TECHNICAL INFORMATION**

Welding positions: flat and flat-frontal





**DATA SHEET**  
**DS 261**  
**Rev. 05 dd 12/09/2013**  
**INESUB EB3**

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

### WELDING PARAMETERS

Current	DC + Reverse polarity, AC					
Diameter (mm)	2.0	2.4	3.2	4.0		
Intensity (A)	300 ÷ 400	350 ÷ 450	430 ÷ 530	480 ÷ 580		
Volts (V)	26 ÷ 29	27 ÷ 30	27 ÷ 30	27 ÷ 30		

### TYPICAL CHEMICAL COMPOSITION OF WIRE

C %	Mn %	Si %	S %	P %	Cr %	Ni %	Mo %	Cu %	
0.12	0.60	0.15	0.010	0.010	2.50	-	1.0	0.15	

**NOTE:** refer to the results obtained with the relevant flux for the mechanical characteristics of the deposited metal.

### PRODUCTS AVAILABLE

Process	Product	AWS Classification	EN Classification
<b>MIG/MAG</b> 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
<b>TIG</b> Rods	INETIG CROMO 2	AWS A 5.28: ER90S-G	EN 21952-A: W CrMo2Si
	INETIG B3	AWS A 5.28: ER90S-B3	EN 21952-B: W 2C1M
	INETIG B3 L	AWS A 5.28: ER80S-B3L	EN 21952-B: W 2C1ML
<b>SAW</b> Submerged arc	INESUB EB3R	AWS A 5.23: EB3R	EN 24598-A: S CrMo2
<b>FCAW</b> Cored wire	INETUB B91T5-B3	AWS A 5.29: E91T5-B3	EN 17634-A: T CrMo2
	INETUB M91TG-B3	AWS A 5.28: E90C-B3	EN 17634-A: T CrMo2
	INETUB R91T1-B3	AWS A 5.29: E91T1-B3	EN 17634-A: T CrMo2
<b>SMAW</b> Electrodes	INE B3	AWS A 5.5: E9018-B3	EN 3580-A: E CrMo2
	INE B3 L	AWS A 5.5: E8018-B3L	EN 3580-A: E CrMo2L