



DATA SHEET
DS 056
Rev. 5 dd 14/01/2013
INEFIL G2MO

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: ER70S-A1	EN ISO 14341-A: G 46 2 M21 2Mo
AWS A 5.28M: ER49S-A1	EN ISO 21952-A: G MoSi
ASME SFA 5.28: ER70S-A1	
ASME SFA 5.28M: ER49S-A1	

APPROVALS

DB	TÜV	

ALLOY TYPE

Low-alloy copper-coated solid wire with 0.5% Mo content for welding low-alloy steels with high tensile strength.

APPLICATIONS

Low-alloy copper-coated solid wire with 0.5% Mo content designed for welding low-alloy steels with high tensile strength and creep-resistant steels. Suitable for pipelines and pressure vessels with operating temperatures of about 500°C. Good impact strength at low temperatures. To be used under the shield of Ar+CO₂.

MATERIALS TO BE WELDED

ASTM		EN		Others
A 335 Gr P1	A 204 Gr A	10028-2 P295 G H	10113-2 S420	
A 487 Gr 2A	A 204 Gr B	10028-2 P355 G H	(DIN 15Mo3)	
A 487 Gr 2B	A 204 Gr C	10028-2 16Mo2	(DIN 16Mo5)	
A 487 Gr 2C	A 217 Gr WC1	10222-2 17Mo3	(DIN 10MnMo 4 5)	
A 209 Gr T1	A 352 Gr LC1	10222-2 14Mo6	(DIN 11MnMo 4 5)	
A 250 Gr T1		10113-2 S275		
A 336 Gr F1		10113-2 S355		

WELDING GUIDELINES

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

TECHNICAL INFORMATION

Gas: Mix Ar- CO₂ (EN 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 %	
0.09	1.20	0.60	0.01	0.01	-	-	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
		(N/mm ²)	(N/mm ²)	%	(Joule)	(Joule)	(Joule)	(Joule)	(Joule)
M21	as welded	500	620	23	150	130	90	-	-
M21	after PWHT	480	600	25	170	150	100	-	-

PRODUCTS AVAILABLE

Process	Product	Classification AWS	Classification EN
MIG/MAG Solid wire	INEFIL D2	AWS A 5.28: ER80S-D2 AWS A 5.28: ER90S-D2	EN 14341-A: G 4Mo
TIG Rods	INETIG G2MO INETIG D2	AWS A 5.28: ER70S-A1 AWS A 5.28: ER80S-D2 AWS A 5.28: ER90S-D2	EN 21952-A: W MoSi EN 636-A: W2Mo EN 636-B: W4M31
SAW Submerged arc	INESUB S2MO INESUB EA3	AWS A 5.23: EA2 AWS A 5.23: EA3	EN 14171-A: S2Mo EN 14171-A: S4Mo
FCAW Cored wire	INETUB M81TG-A1 INETUB B81T5-A1	AWS A 5.28: E80C-G AWS A 5.29: E81T5-A1	EN 17632-A: T Mo EN 17634-A: T Mo
SMAW Electrodes	INE A1	AWS A 5.5: E7018-A1	EN 3580-A: E Mo