



# MIG F81

Old reference: MIG 80SNi1

## Classification

AWS A5.28 : ER80S-Ni1

ISO 14341-A : G 46 6 M21 3Ni1

## Description & Applications

Copper coated solid wire low alloyed with Nickel (1% Ni) for gas (Ar + CO<sub>2</sub>) metal arc welding of fine grain steels and cold tough steels at low service temperature. Good impact strength at low temperatures down to -60°C.

**Main applications:** For liquid gas distribution pipes, tanks, off shore, and petro-chemistry.

**Base materials:**

**Fine grain steels, cold tough steels :**

EN	ASTM
S275	A 131 gr A, B, D, E
S355	A 333 gr 6
S420	A 334 gr 6
L290, L290 G A	A 350 gr LF2, LF5
L360, L360G A	API 5LX42, 46, 52, 60, 65
L415	

## Typical Weld Metal Composition ( % )

	C	Si	Mn	Cr	Ni	Mo	Cu	Al	Ti+Zr	V	P	S	O/T
Min	0.06	0.50	1.00		0.80								
Max	0.12	0.80	1.25	0.15	1.10	0.15	0.35	0.02	0.15	0.03	0.020	0.020	0.50
Type	0.10	0.70	1.2	0.10	1.0	0.01	0.15	0.005	0.003	0.002	0.015	0.010	<0.50

## All Weld Metal Mechanical Properties

	R <sub>e</sub> ( MPa )	R <sub>m</sub> ( MPa )	A <sub>5</sub> ( % )	KV ( J )
Min	470	550	24	-60°C >47
Max		680		
Type	500	600	25	-60°C 60

## Weld Current & Instructions

Welding mode	Wire Ø (mm)	Welding parameters		Shielding Gas
		Current ( A )	Voltage ( V )	
GMAW = +	1.0	80 - 260	17 - 32	ISO 14175: M21 (Ar/CO <sub>2</sub> ) 12-15 l/min
	1.2	100 - 360	18 - 34	

FT En-MF20-191113

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