



# TIG F81

Old reference: TIG 80SNi1

## Classification

AWS A5.28 : ER80S-Ni1

ISO 636-A : W 46 6 3Ni1

## Description & Applications

Copper coated solid rod, low alloyed with Nickel (1% Ni) for GTAW 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
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
Type	0.08	0.60	1.1	0.06	1.0	0.05	0.15	0.003	0.003	0.003	0.01	0.01

## 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	580	25	-60°C 65

## Weld Current & Instructions

Welding mode	Shielding gas
TIG = -	ISO 14175: I1 (Ar): 6-12 l/min Back shielding : I1 (Ar) / N1 (Nitrogen) : 3-6 l/min

FT En-TF20-190708

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