



GMAW/GTAW LOW ALLOY STEEL (Low Temperature)

AUTOMIG 80S-Ni1 / TIGFIL 80S-Ni1

COPPER COATED 1% Ni ALLOYED WIRE FOR LOW TEMPERATURE IMPACT PROPERTIES



CLASSIFICATION : EN ISO 14341-A EN ISO 636-A AWS A/SFA 5.28 **APPROVALS :**

Automig 80S-Ni1: G 46 4 M G3Ni1	-	ER80S-Ni1	-
Tigfil 80S-Ni1: -	W 46 4 W3Ni1	ER80S-Ni1	IBR

KEY FEATURES :

- Copper coated low alloy steel solid filler wire & rod
- Typical 1%Ni-Mn alloy
- Uniform copper coating
- Medium strength weld deposit gives high impact at -45°C
- Radiographic quality weld

WELDING POSITION :



GMAW: DCEP
GTAW: DCEN

Shielding Gas	Gas Flow Rate, LPM	Stickout, mm
GMAW: Ar/1-5O ₂	15-22	10-20
GTAW: Ar	10-15	-

TYPICAL APPLICATIONS :

- Welding of 1% Ni steels
- Welding fine grained and low alloyed Ni steels
- Welding of steels for application at sub-zero temperature

STORAGE / HANDLING :

Keep dry and follow handling instructions mentioned on the box

CHEMICAL COMPOSITION OF BARE SOLID WIRE, Wt% :

	C	Mn	Si	Ni	Mo	Cu*	S	P
Specification	0.12 max	1.25 max	0.40-0.80	0.80-1.10	0.35 max	0.35 max	0.025 max	0.025 max

* Including Cu in the coating

MECHANICAL PROPERTIES OF ALL WELD METAL :

	Condition	UTS, MPa	YS at 0.2% offset, MPa	EL%	CVN Impact at -45°C, J
Specification	As Welded	550 min	480 min	24 min	28 min

Hardness, 3 Layer: 210 BHN max (irrespective of type of gas used)

Mechanical properties will vary with the type of shielding gas used.

PACKING DATA :

Automig 80S-Ni1	Ø, mm		Kg/Spool	
		1.2		15
	1.6		15	
Tigfil 80S-Ni1	Ø x L, mm	Primary Box, Kg	No. of Primary Boxes	Net Wt. of Carton, Kg
	1.6 x 1000	5	4	20
	2.0 x 1000	5	4	20
	2.5 x 1000	5	4	20

EQUIVALENT :

SMAW Electrode: **Tenalloy 70C**