



ER 80S-Ni1

Low Alloy WIRE/GMAW



Standards

EN/ISO-Standard - 14341-A
EN/ISO-Classification - G 3Ni1

AWS-Standard - A5.28
AWS-Classification - ER 80S-Ni1

Features and Applications

- Copper coated, Ni-alloy (1,0% Ni), solid wire for low temperature, fine grained and austempering steels.
- Excellent impact toughness due to the addition of Nickel.
- Good mechanical properties at sub-zero temperatures down to -50°C.
- Especially suitable for use in the offshore industry.
- Precision layer wound for superior wire feeding characteristics.
- Typically used on the building up of cranes, transport, tanks, industrial facilities, equipment in general, pipelines, shipbuilding etc.
- Green wire is produced using virgin raw materials sourced from specialised steel mills, which ensures consistent reliability and quality.
- **Test Certificates can be found online @wilkinsonstar247.com**



Approvals

CE, UKCA

Typical Base Materials

A106, A515, A714, A131, A369, A210, L290, P235 T1/T2, P275 T1 ; L360, L415 ; P275T2, P355N ; X-42, X46, X62, X60 ; P235GH, P355GH ; A283, A285, A414, A372, A662, S275, S420, A516, A255, A333, A350, A612*

* Illustrative, not exhaustive list

Welding Positions

EN ISO 6947 - PA, PB, PC, PD, PE, PF, PG

Shielding Gases

EN ISO 14175 - C1, M21, Argon + 1-5% O2

Polarity

DC (+)

Chemical Composition % (Typical)

C %	Si %	Mn %	P %	S %	Cu % ^a	Cr %	Ni %	Mo %	Al %	V %	Zr+Ti %
0.09	0.70	1.20	<0.015	<0.015	<0.25	<0.15	1.00	<0.15	<0.020	<0.030	<0.050

^a (includes copper coating)

Packaging Data

Part No.	Diameter Ø (mm)	Package Weight (Kg)	Package Type	Pallet Quantity
6031100483	0.80	15	D300 PLW	72
6031100482	1.00	15	D300 PLW	72
6031100481	1.20	15	D300 PLW	72

Welding Parameters

Ø mm	0.80	1.00	1.20
Current (A)	40-160	80-270	120-340
Voltage (V)	16-22	18-28	20-33

Mechanical Properties (Typical)

Tensile Strength (N/mm ²)	Yield Strength (N/mm ²)	Elongation (%)	Impact Strength (J)	Test Temperature
600	480	26	100	-50°C

Mechanical properties are approximate and may vary based on the heat, shielding gas, welding parameters and other factors.