



ER NiCr-3 (ALLOY 82)

Nickel Alloy WIRE/GTAW



Standards

EN/ISO-Standard - 18274

EN/ISO-Classification - S Ni 6082 - NiCr20Mn3Nb

AWS-Standard - A5.14

AWS-Classification - ER NiCr-3

Features and Applications

- Alloy 82 is used for the welding of alloys 600, 601, 690, 800 and 800HT etc.
- Weld metal deposited has high strength and good corrosion resistance, including oxidation resistance and creep rupture strength at elevated temperatures.
- Ideal for dissimilar welding applications between various nickel alloys, stainless steels, carbon steels including overlay.
- Suitable for applications ranging from cryogenic to high temperatures making this alloy one of the most used in the nickel family.
- Typically used in the power generation and petrochemical industries etc.
- Test Certificates can be found online @wilkinsonstar247.com**



Typical Base Materials

Alloy 600, Alloy 601, Alloy 690, Alloy 800, Alloy 330*

* Illustrative, not exhaustive list

Welding Positions

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

Polarity

DC (-)

Shielding Gases

EN ISO 14175 - TIG: I1 (Argon)

Chemical Composition % (Range)

C %	Mn %	Fe %	P %	S %	Si %	Cu %	Ni %	Co %	Ti %	Cr %	Nb + Ta %
max	2.50	max	max	max	max	max	67.00	max	max	18.00	2.00
0.05	3.50	3.00	0.030	0.015	0.50	0.50	min	1.00	0.75	22.00	3.00

Packaging Data

Part No.	Diameter Ø (mm)	Package Length (mm)	Package Weight (Kg)	Package Type
6031100106	1.60	1000	5	Cardboard Tube
6031100303	2.40	1000	5	Cardboard Tube

Mechanical Properties

Tensile Strength (N/mm ²)	Yield Strength (N/mm ²)	Elongation (%)	Impact Strength (J)
≥550	≥360	≥30	≥100

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