



MIG NI82

Classification

AWS A5.14 : ERNiCr-3

ISO 18274 : S Ni 6082 (NiCr20Mn3Nb)

Description & Applications

Solid wire for GMAW of high nickel content alloys like Inconel 600* or Incoloy 800*. Used in the construction of equipment submitted to oxidizing and corrosive attacks at high temperatures. High resistance at low temperatures on steels of 5% and 9% Ni. Also used for heterogenous assembly between C-Mn steels or low alloy steels with stainless steels or Nickel base alloy and with some copper alloys.

* Trade mark INCO ALLOYS

Main applications: Construction and repair welding of high strength steels, tool steels, corrosion resistant steels, high temperature and nickel alloys in component manufacturing, furnace construction, cement industry.

Base materials:

UNS	Alloy	DIN	Material N°
	5%Ni	12Ni19	1.5680
N06600	600	NiCr15Fe	2.4816
N08800	800	X10NiCrAlTi3220	1.4876
N08810	800H	X5NiCrAlTi3120	1.4958
	DS	X8NiCrSi3818	1.4862

Typical Chemical Composition (%)

	C	Si	Mn	Cr	Nb+Ta	Cu	P	S	Fe	Ti	Ni
Min			2.5	18.0	2.0						67.0
Max	0.10	0.50	3.5	22.0	3.0	0.50	0.03	0.015	3.0	0.7	
Type	0.03	0.20	3.2	20.5	2.3	0.01	0.01	0.01	2.0	0.30	>67.0

All Weld Metal Mechanical Properties

	R _{p0.2} (MPa)	R _m (MPa)	A ₅ (%)	KV (J)
Min	-	-	-	-
Max				
Type	430	670	42	+20°C : 200 -196°C : 100

Welding Current & Instructions

Welding mode	Wire Ø (mm)	Welding parameters		Shielding Gas
		Current (A)	Voltage (V)	
GMAW = +	0.8	70 - 180	18 - 26	ISO 14175: I1 (100% Ar) I3 (Ar+10-30%He) Z (Ar+He+H+CO ₂) 15-20 l/min
	1.0	80 - 220	18 - 28	
	1.2	150 - 320	22 - 32	
	1.6	220 - 380	24 - 34	

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