

Inweld Nickel 82

UNS N06082

AWS A5.14 Class ERNiCr-3

ASME SFA5.14 ERNiCr-3



Description and Applications:

Inweld Nickel 82 is used for welding nickel-chromium-iron alloys, for the clad side of joints in steel clad with nickel-chromium-iron alloy, for surfacing steel with nickel-chromium-iron weld metal, and for joining steel to nickel-base alloys. Typical specifications for the nickel-chromium base metal are ASTM B163, B166, B167, and B168, all of which have UNS number N06600. The filler metal can be used with the gas tungsten arc (GTAW), gas metal arc (GMAW), submerged arc (SAW) and plasma arc welding processes.

Chemical Composition of Nickel 82 ERNiCr-3

Ni ^a	C	Mn	Fe	S	Si	Cu	P	Co	Ti	Cr	Cb+Ta	Other(s)
67.0 min	0.10	2.5-3.5	3.0	0.015	0.50	0.50	0.03	e	0.75	18.0-22.0	2.0-3.0 ^f	0.50

Single values are maximum unless otherwise specified.

^a May contain incidental Co (Cobalt).

^e Cobalt – 0.12 maximum, when specified.

^f Tantalum – 0.30 maximum, when specified.



Minimum Mechanical Properties (as welded)

Tensile Strength (psi): 80,000 (550 MPA)

Elongation (%) 30

Recommended Welding Parameters:

	Wire Diameter	Voltage*	Amperage*
GMAW Spray Transfer mode (DCRP-Electrode+) 100% Ar	0.035"	26-32	175-240
	0.045"	26-32	225-300
	1/16"	27-33	250-330
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GTAW (DCSP – Electrode -) ACHF using 100% Argon	1/16"	70-120	70-150
	3/32"	120-160	140-230
	2% Thoriated, 2% Ceriated or	170-230	225-320
	2% Lanthanum Tungsten Electrode	5/32"	220-280
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