



ERNi-1 DATA SHEET

Pinnacle Alloys ERNi-1 (61)

AWS CLASS ERNi-1

CODE AND SPECIFICATION DATA:

AWS A5.14 ASME SFA 5.14; UNS N02061

DESCRIPTION:

Pinnacle Alloys ERNi-1 has a nominal composition (wt.-%) of 96 Ni, 3 Ti. Filler metal of this classification is intended for welding wrought and cast forms of commercially pure nickel (ASTM B 160, B 161, B 162, and B 163 having UNS Number N02200 or N02201) to itself using the GTAW, GMAW, SAW, and PAW processes. The filler metal contains sufficient titanium to control weld-metal porosity with these welding processes. The weld metal has good corrosion resistance, particularly in alkalis. Pinnacle Alloys ERNi-1 is well suited for dissimilar welding, including the joining of Nickel 200 and 201 to stainless steel. It can also be used for joining carbon steels to copper-nickel alloys.

DIAMETERS: .035", .045", 1/16", 3/32", 1/8", 5/32"**WELDING POSITIONS:** GTAW & GMAW: All positions**TYPICAL DEPOSIT COMPOSITION:**

	AWS Spec	Weld Metal Analysis (%)
Aluminum (Al)	1.50	0.06
Carbon (C)	0.15	0.012
Copper (Cu)	0.25	0.003
Iron (Fe)	1.00	0.027
Manganese (Mn)	1.00	0.384
Nickel (Ni)	93.0 min	95.96
Phosphorus (P)	0.03	0.003
Silicon (Si)	0.75	0.414
Sulfur (S)	0.015	0.001
Titanium (Ti)	2.0-3.5	2.95

NOTE: Single values are maximums.

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AN ISO 9001:2015 COMPANY
CERTIFICATE NO.: C755336

TYPICAL MECHANICAL PROPERTIES:

	AWS Spec (min)	As Welded
Ultimate Tensile Strength	Not required	73,000 psi (500 MPa)
Percent Elongation in 2"	Not required	42%

TYPICAL WELDING PARAMETERS:

	Diameter	Amperage	Volts	Shielding Gas
GTAW	1/16"	80-110		100% Ar
	3/32"	90-130		
	1/8"	120-175		
	5/32"	150-220		
GMAW	.035"	150-190	26-29	75% Ar/ 25% He
	.045"	180-220	28-32	
	1/16"	200-250	29-33	
SAW	3/32"	275-350	28-30	Suitable Flux
	1/8"	350-450	29-32	

NOTE: Maintaining a proper welding procedure, including pre-heat and interpass temperatures, may be critical depending on the type and thickness of material being welded.

NOTICE: The results reported are based upon testing of the product under controlled laboratory conditions in accordance with American Welding Society Standards. Actual use of the product may produce different results due to varying conditions. An example of such conditions would be electrode size, plate chemistry, environment, weldment design, fabrication methods, welding procedure and service requirements. Thus the results are not guarantees for the use in the field. The manufacturer disclaims any warranty of merchantability of fitness for any particular purpose with respect to its products.

CAUTION: Consumers should be thoroughly familiar with the safety precautions on the warning label posted in each shipment and in the American National Standards A49.1, "Safety in Welding and Cutting," published by the American Welding Society, 8669 NW 36 Street, #130, Miami, FL 33126: OSHA Safety and Health Standards 29 CFR 1910 is available from the U.S. Department of Labor, Washington, D.C. 20210.

Pinnacle Alloys SDS sheets may be obtained on the website below.