



Pinnacle Alloys are products of SOWESCO

ISO 9001:2008 REGISTERED  
Certificate No.: 50040 & 50415

## ERCuNi DATA SHEET

### Pinnacle Alloys ERCuNi (67)

AWS CLASS ERCuNi

#### CODE AND SPECIFICATION DATA:

AWS A5.7 ASME SFA 5.7; UNS C71581

**COMMON NAME:** Copper-Nickel

#### DESCRIPTION:

Pinnacle Alloys ERCuNi (Copper-Nickel) is used for the welding of wrought or cast 70/30, 80/20, and 90/10 copper-nickel alloys to themselves or to each other. These filler metals are also used for welding the clad side of copper-nickel clad steel. Pinnacle Alloys ERCuNi may also be used for surfacing applications where high resistance to corrosion, erosion, or cavitation is required. Preheating generally is not necessary. The arc should be kept as short as possible to assure adequate shielding gas coverage and thus minimize porosity.

For GTAW, direct current-electrode negative (DCEN) is typically used. Either argon or helium (or a combination of the two) is used as a shielding gas. For GMAW, direct current-electrode positive (DCEP) is typically employed. Argon or argon/helium mixture shielding gases are most often used.

**DIAMETERS:** .035", .045", 1/16", 3/32", 1/8", 5/32"

**WELDING POSITIONS:** All positions



#### TYPICAL DEPOSIT COMPOSITION:

	AWS Spec	Weld Metal Analysis (%)
Copper (Cu) <sup>a</sup>	Balance	
Iron (Fe)	0.40-0.75	
Lead (Pb)	0.02	
Manganese (Mn)	1.00	
Nickel (Ni) <sup>b</sup>	29.0-32.0	
Phosphorus (P)	0.02	
Silicon (Si)	0.25	

SOWESCO, LLC

www.pinnaclealloys.com

9384 Wallisville Road • Houston, Texas 77013 • 1-800-856-9353 • (713) 688-9353 • Fax (713) 688-6985  
2602 S. 50th Avenue • Phoenix, Arizona 85043 • 1-866-442-9353 • (602) 442-9353 • Fax (602) 442-9354



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Sulfur (S)	0.01	
Titanium (Ti)	0.20-0.50	

NOTE: Single values are maximums.

<sup>a</sup> Copper including incidental Silver

<sup>b</sup> Nickel including incidental Cobalt



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#### TYPICAL MECHANICAL PROPERTIES:

	AWS Spec (min)	As Welded
Ultimate Tensile Strength	Not required	≥ 50,000 psi (345 MPa)
Hardness	Not required	60-80 HBW

**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.