



ISO 9001:2015 REGISTERED  
Certificate No.: 50040 & 50415

## ERNiCrMo-3 DATA SHEET

### Pinnacle Alloys ERNiCrMo-3 (625)

AWS CLASS ERNiCrMo-3

#### CODE AND SPECIFICATION DATA:

AWS A5.14 ASME SFA 5.14; UNS N06625

#### DESCRIPTION:

Pinnacle Alloys ERNiCrMo-3 has a nominal composition (wt.-%) of 61 Ni, 22 Cr, 9 Mo, 3.5 Nb + Ta. Filler metal of this classification is used for welding nickel-chromium-molybdenum alloy (ASTM B 443, B 444, and B 446 having UNS Number N06625) to itself, to steel, to other nickel-based alloys, for cladding steel with nickel-chromium-molybdenum weld metal, and for welding the clad side of joints in steel with nickel-chromium-molybdenum alloy using the GTAW, GMAW, SAW, and PAW processes. Pinnacle Alloys ERNiCrMo-3 delivers moderate strengths, excellent corrosion resistance, and good oxidation resistance. This filler metal is recommended for applications where the operating temperature ranges from cryogenic to 1000°F. This wire is well suited for welding piping systems and reactor components in the power generation industry and for high temperature service in a wide variety of other engineering applications including furnace equipment and petrochemical plants and in marine and offshore environments.

**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)	0.40	0.104
Carbon (C)	0.10	0.011
Chromium (Cr)	20.0-23.0	22.26
Copper (Cu)	0.50	0.026
Iron (Fe)	5.00	0.264
Manganese (Mn)	0.50	0.041
Molybdenum (Mo)	8.0-10.0	9.08
Nickel (Ni)	58.0 min	64.13
Phosphorus (P)	0.02	0.003
Silicon (Si)	0.50	0.056
Sulfur (S)	0.015	0.001
Titanium (Ti)	0.40	0.209

www.pinnaclealloys.com

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Niobium (Nb) + Tantalum (Ta)	3.15-4.15	3.63
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NOTE: Single values are maximums.

#### TYPICAL MECHANICAL PROPERTIES:

	AWS Spec (min)	As Welded
Ultimate Tensile Strength	Not required	115,000 psi (790 MPa)
Percent Elongation in 2"	Not required	45%

#### TYPICAL WELDING PARAMETERS:

	Diameter	Amperage	Volts	Shielding Gas
GTAW	1/16"	90-130		100% Ar
	3/32"	120-175		
	1/8"	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	
	5/32"	400-550	30-33	

**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.

[www.pinnaclealloys.com](http://www.pinnaclealloys.com)

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