



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

## 16-8-2-AP DATA SHEET

### Pinnacle Alloys 16-8-2-AP

- Non-AWS; chemistry meets AWS 5.4 Class E16-8-2 & AWS 5.9 Class ER16-8-2
- In accordance with UNS Number S16880
- Manufactured in accordance to the same processes as used for other products defined in AWS 5.22

### DESCRIPTION:

Pinnacle Alloys 16-8-2-AP is a gas-shielded, flux cored, stainless steel electrode composed of 15.5% chromium, 8.5% nickel, and 1.5% molybdenum. Pinnacle Alloys 16-8-2-AP may be used to weld 16-8-2, 316, and 347 grades of stainless steel in high temperature piping systems. Due to its good hot ductility properties, Pinnacle Alloys 16-8-2-AP is well suited for welding cat crackers, furnace parts, and components utilized in the petrochemical, chemical processing, and power generation industries.

### CHARACTERISTICS:

- Outstanding all position performance.
- Excellent slag peeling minimizes cleanup.
- Very low spatter.
- Flat, well washed beads achieved with minimal weaving.

**SHIELDING GAS:** 100% CO<sub>2</sub>, 75-80% Ar-20/25% CO<sub>2</sub>, 40-55 cfh

**DIAMETERS:** .045", 1/16"

**WELDING POSITIONS:** All positions

### TYPICAL CHEMICAL COMPOSITION (Wt % 98 Ar/2 O<sub>2</sub>):

Carbon (C)	0.02
Chromium (Cr)	15.50
Manganese (Mn)	1.50
Molybdenum (Mo)	1.50
Nickel (Ni)	8.50
Silicon (Si)	0.70

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**TYPICAL MECHANICAL PROPERTIES (Wt% 100 CO<sub>2</sub>):**

Ultimate Tensile Strength (psi)	86,000
Yield Strength (psi)	56,000
Percent Elongation	38%

**TYPICAL WELDING PARAMETERS (Wt% 100 CO<sub>2</sub>):**

Diameter	WFS (ipm)	Amperage	Volts	ESO (in.)	Dep. Rate (lbs/hr)
.045"	250	130	24	5/8-3/4"	5.4
	<b>300</b>	<b>160</b>	<b>26</b>	<b>5/8-3/4"</b>	<b>6.3</b>
	<b>425</b>	<b>200</b>	<b>28</b>	<b>5/8-3/4"</b>	<b>9.2</b>
	780	270	34	5/8-3/4"	16.2
1/16"	150	170	25	3/4-1"	5.4
	<b>195</b>	<b>215</b>	<b>27</b>	<b>3/4-1"</b>	<b>7.0</b>
	<b>240</b>	<b>250</b>	<b>28</b>	<b>3/4-1"</b>	<b>8.6</b>
	320	305	29	3/4-1"	11.5

**Note:** Optimum conditions are in boldface type. For Ar/ 20-25% CO<sub>2</sub> mixture, reduce voltage by 2V.

**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, 550 NW LeJune Road, 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 MSDS sheet may be obtained at [www.pinnaclealloys.com](http://www.pinnaclealloys.com).