

**ER1100 DATA SHEET****Pinnacle Alloys ER1100**

AWS CLASS ER1100, R1100

**CODE AND SPECIFICATION DATA:**

AWS A5.10 ASME SFA 5.10

**DESCRIPTION:**

Pinnacle Alloys ER1100 is 99% aluminum filler, typically used on similar base metal such as 1060, 1070, 1080, 1100, 1350, and 3003.

**DIAMETERS:** .030", .035", 3/64", 1/16", 3/32", 1/8", 5/32"**TYPICAL CHEMICAL COMPOSITION (Wt %):**

|                          |                                   |
|--------------------------|-----------------------------------|
| Aluminum (Al)            | 99.0 min                          |
| Beryllium (Be)           | 0.0008 max                        |
| Copper (Cu)              | 0.05-0.20                         |
| Manganese (Mn)           | 0.50 max                          |
| Zinc (Zn)                | 0.10 max                          |
| Iron (Fe) + Silicon (Si) | 0.95 max                          |
| Other elements           | 0.05 max each &<br>0.15 max total |

**TYPICAL MECHANICAL PROPERTIES:**

|                                 |                             |
|---------------------------------|-----------------------------|
| Melting Range                   | 1090°F-1215°F (643°C-657°C) |
| Ultimate Tensile Strength (psi) | 14,000-23,000 psi           |
| Yield Strength (psi)            | 8,000-22,500 psi            |
| Percent Elongation in 2"        | 5-32%                       |
| Density                         | 0.098 lbs/in <sup>3</sup>   |
| Post Anodize Color              | White-gold                  |

**TYPICAL MIG WELDING PARAMETERS (DCEP):**

| Diameter | WFS (ipm) | Amperage | Volts | Consumption (lb/100 ft) | Argon (cfh) |
|----------|-----------|----------|-------|-------------------------|-------------|
| .030"    | 480-625   | 60-175   | 15-24 | 0.65-1.25               | 25-30       |
| .035"    | 450-750   | 70-185   | 15-27 | 1.0-4.25                | 30-35       |
| 3/64"    | 330-500   | 125-260  | 20-29 | 1.0-4.25                | 35-45       |
| 1/16"    | 250-450   | 170-300  | 24-30 | 3.8-6.6                 | 45-75       |



**AN ISO 9001:2015 COMPANY**  
CERTIFICATE NO.: C755336

**TYPICAL TIG WELDING PARAMETERS:**

| Base Thickness | Filler Wire Size | Tungsten | Amperage | Consumption (lb/100 ft) | Argon (cfh) | Gas Cup Size |
|----------------|------------------|----------|----------|-------------------------|-------------|--------------|
| 1/16"          | 1/16"            | 1/16"    | 60-80    | 0.75                    | 20          | 3/8"         |
| 3/32"          | 3/32"            | 3/32"    | 85-120   | 1.0                     | 20          | 3/8"         |
| 1/8"           | 3/32"            | 3/32"    | 125-160  | 1.5                     | 20          | 3/8"         |
| 3/16"          | 1/8"             | 1/8"     | 190-220  | 4.5-6                   | 25          | 7/16"        |
| 1/4"           | 5/32"            | 5/32"    | 200-300  | 8-10                    | 30          | 1/2"         |

**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).