AN ISO 9001:2015 COMPANY
CERTIFICATE NO.: C755336

# PREMIER 719 PLUS DATA SHEET

**PREMIER 719 PLUS (E71T-1C/1M, 9C/9M)**
AWS CLASS E71T-1C, E71T-1M, E71T-9C, E71T-9M
**CODE AND SPECIFICATION DATA:**
AWS A5.20 ASME SFA 5.20; UNS W07601 & W07609

**DESCRIPTION:**
PREMIER 719 PLUS (E71T-1C/1M, 9C/9M) is a carbon steel electrode designed for single and multipass welding of carbon and certain low alloy steels. These electrodes are designed for use with DCEP power sources. They are characterized by a spray transfer, low spatter loss, flat to slightly convex bead contour, and a moderate volume of slag which completely covers the weld bead. These electrodes have a titania base flux and have the ability to produce high deposition rates. Typical applications include ship building, structural fabrication, general fabrication, and offshore structures. Typical base metal specifications for these steels are ASTM A 516, A 572, and materials with similar composition and strength.

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

**WELDING POSITIONS:** All positions

**TYPICAL DEPOSIT COMPOSITION:**

| | AWS Spec | Weld Metal Analysis (%) | |
|---|---|---|---|
| | | 75% Ar/ 25% $CO_2$ | 100% $CO_2$ |
| Carbon (C) | 0.12 | 0.04 | 0.03 |
| Manganese (Mn) | 1.75 | 1.38 | 1.20 |
| Phosphorus (P) | 0.03 | 0.015 | 0.015 |
| Silicon (Si) | 0.90 | 0.56 | 0.50 |
| Sulfur (S) | 0.03 | 0.012 | 0.012 |

NOTE: Single values are maximums.

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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## TYPICAL MECHANICAL PROPERTIES:

| 100% $CO_2$ Shielding Gas | AWS Spec (min) | As Welded |
|---|---|---|
| Ultimate Tensile Strength | 70,000-95,000 psi (490-670 MPa) | 80,400 psi (554 MPa) |
| Yield Strength | 58,000 psi (390 MPa) | 73,300 psi (505 MPa) |
| Percent Elongation in 2” | 22% | 29% |
| CVN @ -20°F (-30°C) | 20 ft•$lb_f$ (27 Joules) | 36 ft•$lb_f$ (50 Joules) |

| 75% Ar/ 25% $CO_2$ Shielding Gas | AWS Spec (min) | As Welded |
|---|---|---|
| Ultimate Tensile Strength | 70,000-95,000 psi (490-670 MPa) | 84,900 psi (585 MPa) |
| Yield Strength | 58,000 psi (390 MPa) | 76,900 psi (530 MPa) |
| Percent Elongation in 2” | 22% | 28% |
| CVN @ -20°F (-30°C) | 20 ft•$lb_f$ (27 Joules) | 62 ft•$lb_f$ (85 Joules) |

## TYPICAL WELDING PARAMETERS:

| Diameter | Position | Optimum | | | Amperage Range | Voltage Range |
|---|---|---|---|---|---|---|
| | | Amperage | Voltage | WFS (ipm) | | |
| .045” | Flat | 250 | 30 | ~500 | 180-300 | 24-34 |
| 1/16” | Flat | 350 | 35 | ~350 | 200-400 | 30-38 |

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