



Pinnacle Alloys are products of SOWESCO

PREMIER S-6 DATA SHEET

PREMIER S-6

AWS CLASS ER70S-6

CODE AND SPECIFICATION DATA:

AWS A5.18 ASME SFA 5.18; CWB APPROVED

DESCRIPTION:

PREMIER S-6 is a premium carbon steel, "MIG wire", electrode formulated for welding carbon steels with a yield strength range of 55,000-70,000 psi. PREMIER S-6 is well suited for steels containing medium to high levels of mill scale and mild amounts of contaminants. The wire's copper coating promotes excellent feeding characteristics. PREMIER S-6 is a good selection for weldments requiring better tie-in and wetting than possible with a 70S-3 electrode. It is a terrific choice for welding pressure vessels, structural steel, pipe, steel buildings, and automotive repair.

CHARACTERISTICS:

- Has higher manganese and silicon for improved performance over scaled plate.
- Excellent feedability and welder appeal.
- Extremely stable and consistent arc transfer.
- Achieves high wire feed speeds without problems.

SHIELDING GAS: 100% CO₂, 75-95% Ar/balance CO₂, 95-98% Ar/balance O₂, 30-50 cfh

DIAMETERS: .023", .030", .035", .045", .052", 1/16"

WELDING POSITIONS: All positions

TYPICAL DEPOSIT COMPOSITION (Wt %):

Carbon (C)	0.08
Copper (Cu)	0.18
Manganese (Mn)	1.53
Phosphorous (P)	0.009
Silicon (Si)	0.88
Sulfur (S)	0.01

TYPICAL MECHANICAL PROPERTIES (CO₂):

Ultimate Tensile Strength (psi)	80,900 psi
Yield Strength (psi)	68,100 psi
Percent Elongation	28%
CVN (ft•lb _f) @ -20°F	68 ft•lbs



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TYPICAL SPRAY ARC WELDING PARAMETERS (95-98% Ar/balance O₂):

Diameter	WFS (ipm)	Amperage	Volts	WFS (ipm)	Amperage Range	Volts Range
.035"	550	200	29-30	350-750	180-240	24-35
.045"	410	255	29-30	240-600	180-330	27-33
.052"	350	300	29-30	220-620	220-460	25-35
1/16"	300	360	29-30	175-500	240-520	26-37

TYPICAL SHORT ARC WELDING PARAMETERS (for out of position welding):

Diameter	WFS (ipm)	Amperage	Volts	WFS (ipm)	Amperage Range	Volts Range
.023"	300	70	15	150-380	45-90	14-16
.030"	220	100	15	150-350	60-140	14-16
.035"	250	130	17	180-300	90-160	15-19
.045"	150	160	18	125-200	130-200	17-19
.052"	140	160	18	135-190	150-200	17-20

NOTE: Optimum conditions are in boldface type. DCEP (Electrode Positive): Flow rates of 25-45 CFH are required.

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.