

Select 810-A1 HP

Low Alloy / Self Shielded / Flux Cored

PRODUCT DATA SHEET

FEATURES

- Designed for all position welding in single or multiple pass applications.
- Arc transfer is smooth and stable that produces low spatter.
- Addition of ~0.5 wt% molybdenum (Mo) provides increased high temperature strength compared to standard carbon steel electrodes.
- Commonly used in fabrication and erection of boilers and pressure vessels.
- Applications include the welding of C-Mo steel base metals (ASTM A161, A204, A302 Gr. A plate, and A335-P1 pipe).
- Uniquely formulated to meet toughness requirements as low as -50F (-46C).

CONFORMANCES

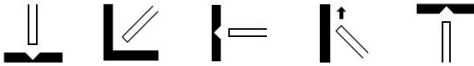
AWS A5.29

E81T1-A1M

DIAMETERS [in [mm]]

0.045 (1.2), 1/16 (1.6)

POSITIONS



SHIELDING GAS

75-80% Ar / Balance CO2

Flow Rate: 40 - 50 CFH

POLARITY

Direct Current Electrode Positive (DCEP)

TYPICAL WELD DEPOSIT CHEMISTRY [WT%]

Shielding Gas	C	Mn	Mo	P	S	Si
75%Ar / 25%CO2	.05	1.00	.50	.012	.011	.25

TYPICAL MECHANICAL PROPERTIES

Shielding Gas	Tensile Strength ksi (MPa)	Yield Strength ksi (MPa)	Elongation (%)	Weld Condition	PWHT Temp	CVN @ -27°F (-33°C) ft-lb (J)	CVN @ -50°F (-46°C) ft-lb (J)
75%Ar / 25%CO2	90 (621)	81 (559)	27	As-Welded	-	43 (58)	35 (47)
75%Ar / 25%CO2	88 (607)	77 (531)	28	PWHT	11501hr for	44 (60)	30 (41)



Revision: 5/20/2025

Notice: Be sure to follow all your employers safety practices, policies and procedures when using this product. Refer to CSA W117.2 and ANSI Z49.1 Safety in Welding, Cutting and Allied Processes for further information and the manufactures SDS sheet. 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 use in the field. The manufacturer disclaims any warranty of merchantability or fitness for any particular purpose with respect to its products.

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RECOMMENDED WELDING PARAMETERS **

Diameter in (mm)	Shielding Gas	Position	WFS* in/min (m/min)	Amps	Volts	CTWD* in (mm)
0.045 (1.2 mm)	75% Ar/25% CO2	All-Position	200 (5.1)	145	23	1/2 - 5/8 (13 - 16)
		All-Position	235 (6.0)	160	23.5	1/2 - 5/8 (13 - 16)
		All-Position	300 (7.6)	185	25	1/2 - 5/8 (13 - 16)
		Flat & Horizontal	375 (9.5)	215	26.5	5/8 - 3/4 (16 - 19)
		Flat & Horizontal	440 (11.2)	235	28	5/8 - 3/4 (16 - 19)
1/16 (1.6 mm)	75% Ar/25% CO2	All-Position	125 (3.2)	165	23	5/8 - 3/4 (16 - 19)
		All-Position	150 (3.8)	195	23.5	5/8 - 3/4 (16 - 19)
		All-Position	185 (4.7)	225	25	5/8 - 3/4 (16 - 19)
		Flat & Horizontal	265 (6.7)	280	26.5	3/4 - 1 (19 - 25)
		Flat & Horizontal	325 (8.3)	320	28	3/4 - 1 (19 - 25)

* WFS = Wire Feed Speed, CTWD = Contact Tip To Work Distance

**The parameters listed are recommended starting points of operation and the ranges for amperage, wfs, and voltage could be extended based on fitness for application. For products with "all-position" capability, as determined and listed in classification, the position recommendation can be determined based on operator skill and material thickness and isn't limited to the listing.

PACKAGING (lbs (kgs))

33 (15) Spools, 60 (27.2) Coils, 500 (226.8) Round Drum, 800 (362.9) Hex Drum, 900 (408.2) Hex Drum

*Some packaging options may not be available depending on diameter and product. Special package options may be available upon request.

STORAGE AND HANDLING

All products should be stored in original packaging, in dry conditions and handled with care. For more information refer to our website.



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