Select 810-A1

Low Alloy / Gas 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).

CONFORMANCES

AWS A5.29 E81T1-A1C-H8

E81T1-A1M-H8

DIAMETERS [in (mm)]

0.035 (0.9), 0.045 (1.2), 1/16 (1.6)

POSITIONS

SHIELDING GAS

75-80% Ar / Balance CO2, 100% CO2
Flow Rate: 40 - 50 CFM

POLARITY

Direct Current Electrode Positive (DCEP)

TYPICAL WELD DEPOSIT CHEMISTRY [WT%]

Shielding Gas	C	Mn	Mo	P	S	Si
100%CO2	0.05	0.85	0.44	0.009	0.010	0.34
75%Ar / 25%CO2	0.05	1.03	0.46	0.010	0.011	0.43

TYPICAL MECHANICAL PROPERTIES

Shielding Gas	Tensile Strength ksi (MPa)	Yield Strength ksi (MPa)	Elongation (%)	Weld Condition	PWHT Temp	CVN @ 70°F (21°C) ft-lb (J)
100%CO2	82 (566)	71 (490)	26	PWHT	1150°F for 1 hr	55 (75)
75%Ar / 25%CO2	90 (621)	79 (545)	26	PWHT	1150°F for 1 hr	35 (47)

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RECOMMENDED WELDING PARAMETERS

Diameter in (mm)	Shielding Gas	Position	WFS* in/min (m/min)	Amps	Volts	CTWD* in (mm)
0.035 (0.9 mm)	100% CO2	All-Position	275 (7.0)	120	23	1/2 - 5/8 (13 - 16)
		All-Position	320 (8.1)	135	24	1/2 - 5/8 (13 - 16)
		All-Position	420 (10.7)	160	26	1/2 - 5/8 (13 - 16)
		Flat & Horizontal	465 (11.8)	180	27	5/8 - 3/4 (16 - 19)
		Flat & Horizontal	570 (14.5)	200	29	5/8 - 3/4 (16 - 19)
0.045 (1.2 mm)	100% CO2	All Positions	200 (5.1)	145	23	1/2 - 5/8 (13 - 16)
		All Positions	235 (6.0)	160	24	1/2 - 5/8 (13 - 16)
		All Positions	300 (7.6)	185	26	1/2 - 5/8 (13 - 16)
		Flat & Horizontal	375 (9.5)	215	27	5/8 - 3/4 (16 - 19)
		Flat & Horizontal	440 (11.2)	235	29	5/8 - 3/4 (16 - 19)
1/16 (1.6 mm)	100% CO2	All Positions	125 (3.2)	165	23	5/8 - 3/4 (16 - 19)
		All Positions	150 (3.8)	195	24	5/8 - 3/4 (16 - 19)
		All Positions	185 (4.7)	225	26	5/8 - 3/4 (16 - 19)
		Flat & Horizontal	265 (6.7)	280	27	3/4 - 1 (19 - 25)
		Flat & Horizontal	325 (8.3)	320	29	3/4 - 1 (19 - 25)

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

For welding in 75-80% Ar/Balance CO2, decrease voltage by 1 - 1.5 volts.

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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