

Select 812-K2C

Low Alloy / Gas Shielded / Flux Cored

PRODUCT DATA SHEET

FEATURES

- Intended for single and multiple pass welding of structural steel and fabrications utilizing high strength, low alloy steels, such as HY-80, ASTM A514, A633, and A710
- Designed for use with 100% CO₂ shielding gas with excellent CVN toughness values down to -76° F
- The arc transfer mode is a smooth, ball transfer, that produces minimal spatter.
- Typical applications include low temperature storage tanks, offshore drilling rigs, shipbuilding, and construction machinery.

CONFORMANCES

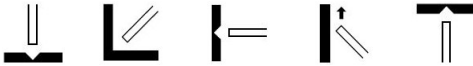
AWS A5.29

E81T1-K2CJH4

DIAMETERS [in (mm)]

0.045 (1.2), 0.052 (1.3), 1/16 (1.6)

POSITIONS



SHIELDING GAS

100% CO₂

Flow Rate: 40 - 50 CFH

POLARITY

Direct Current Electrode Positive (DCEP)

TYPICAL WELD DEPOSIT CHEMISTRY (WT%)

Shielding Gas	C	Cr	Mn	Mo	Ni	P	S	Si	V
100%CO ₂	0.05	0.08	1.17	<0.01	1.65	0.007	0.009	0.24	0.02

TYPICAL MECHANICAL PROPERTIES

Shielding Gas	Tensile Strength ksi (MPa)	Yield Strength ksi (MPa)	Elongation (%)	Weld Condition	PWHT Temp	CVN @ -40°F (-40°C) ft-lb (J)	CVN @ -76°F (-60°C) ft-lb (J)
100%CO ₂	94 (648)	82 (566)	28	As-Welded	-	65 (88)	40 (54)



Revision: 1/17/2025

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)	100% CO2	All Positions	200 (5.1)	145	24	1/2 - 5/8 (13 - 16)
		All Positions	235 (6.0)	160	25	1/2 - 5/8 (13 - 16)
		All Positions	300 (7.6)	185	27	1/2 - 5/8 (13 - 16)
		Flat & Horizontal	375 (9.5)	215	28	5/8 - 3/4 (16 - 19)
		Flat & Horizontal	440 (11.2)	235	29	5/8 - 3/4 (16 - 19)
0.052 (1.3 mm)	100% CO2	All Positions	170 (4.3)	155	24	5/8 - 3/4 (16 - 19)
		All Positions	200 (5.1)	175	25	5/8 - 3/4 (16 - 19)
		All Positions	250 (6.4)	225	27	5/8 - 3/4 (16 - 19)
		Flat & Horizontal	310 (7.9)	250	28	3/4 - 1 (19 - 25)
		Flat & Horizontal	395 (10.0)	280	29	3/4 - 1 (19 - 25)
1/16 (1.6 mm)	100% CO2	All Positions	125 (3.2)	165	24	5/8 - 3/4 (16 - 19)
		All Positions	150 (3.8)	195	25	5/8 - 3/4 (16 - 19)
		All Positions	185 (4.7)	225	27	5/8 - 3/4 (16 - 19)
		Flat & Horizontal	265 (6.7)	280	28	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

**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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