

Select 100C-K3

Low Alloy / Gas Shielded / Metal Cored

PRODUCT DATA SHEET

FEATURES

- Arc transfer is a stable, fine droplet spray with virtually no spatter generation especially as %Ar increases.
- Intended for single and multiple pass welding of structural steel and fabrications utilizing high strength, low alloy steels, such as HY-100, ASTM A514, A633, and A710.
- Typical applications include low temperature storage tanks, offshore drilling rigs, shipbuilding, and construction machinery where excellent low-temperature toughness is required.

CONFORMANCES

AWS A5.28	E100C-K3
ASME SFA 5.28	E100C-K3

DIAMETERS (in [mm])

0.035 (0.9), 0.045 (1.2), 0.052 (1.3), 1/16 (1.6)

POSITIONS



SHIELDING GAS

75-95% Ar / 5-25% CO₂, 95-98% Ar / Balance O₂.

Flow Rate: 40 - 50 CFH

POLARITY

Direct Current Electrode Positive (DCEP)

TYPICAL WELD DEPOSIT CHEMISTRY (WT%)

Shielding Gas	C	Cr	Cu	Mn	Mo	Ni	P	S	Si	V
75%Ar / 25%CO ₂	0.05	0.06	0.05	1.70	0.41	1.85	0.008	0.011	0.69	0.01
95%Ar / 5%CO ₂	0.05	0.06	0.05	1.80	0.43	1.83	0.008	0.010	0.76	0.01

TYPICAL MECHANICAL PROPERTIES

Shielding Gas	Tensile Strength ksi (MPa)	Yield Strength ksi (MPa)	Elongation (%)	Weld Condition	PWHT Temp	CVN @ -60°F (-50°C) ft-lb (J)
75%Ar / 25%CO ₂	104 (717)	89 (614)	20	As-Welded	-	39 (53)
95%Ar / 5%CO ₂	106 (731)	94 (648)	26	As-Welded	-	22 (30)



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)
0.035 (0.9 mm)	75% Ar/25% CO2	Flat & Horizontal	345 (8.8)	170	23	1/2 - 5/8 (13 - 16)
		Flat & Horizontal	425 (10.8)	190	24	1/2 - 5/8 (13 - 16)
		Flat & Horizontal	475 (12.1)	210	25.5	5/8 - 3/4 (16 - 19)
		Flat & Horizontal	570 (14.5)	225	27	5/8 - 3/4 (16 - 19)
0.045 (1.2 mm)	75% Ar/25% CO2	Flat & Horizontal	260 (6.6)	200	23	1/2 - 5/8 (13 - 16)
		Flat & Horizontal	305 (7.7)	220	24	1/2 - 5/8 (13 - 16)
		Flat & Horizontal	360 (9.1)	240	25.5	5/8 - 3/4 (16 - 19)
		Flat & Horizontal	405 (10.3)	255	27	5/8 - 3/4 (16 - 19)
0.052 (1.3 mm)	75% Ar/25% CO2	Flat & Horizontal	235 (6.0)	215	23	5/8 - 3/4 (16 - 19)
		Flat & Horizontal	315 (8.0)	260	24	5/8 - 3/4 (16 - 19)
		Flat & Horizontal	330 (8.4)	275	25.5	3/4 - 1 (19 - 25)
		Flat & Horizontal	345 (8.8)	295	27	3/4 - 1 (19 - 25)
1/16 (1.6 mm)	75% Ar/25% CO2	Flat & Horizontal	200 (5.1)	250	23	5/8 - 3/4 (16 - 19)
		Flat & Horizontal	245 (6.2)	290	24	5/8 - 3/4 (16 - 19)
		Flat & Horizontal	275 (7.0)	310	25.5	3/4 - 1 (19 - 25)
		Flat & Horizontal	285 (7.2)	330	27	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.

Welding parameters are for 75% Ar /25% CO2, at higher levels of argon the voltage should be gradually decreased: ½-1 volt for 85% Ar/15% CO2, 1-1 ½ volts for 90% Ar/10% CO2, and 1-2 volts for 95% Ar/5% CO2 & 98% Ar/2% O2.

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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