

Select 90C-M2

Low Alloy / Gas Shielded / Metal Cored

PRODUCT DATA SHEET

FEATURES

- Select 90C-M2 is a premium, composite metal cored electrode, exhibiting superb welder appeal and outstanding mechanical properties.
- Intended for single and multiple pass welding of certain low alloy steels, in the flat and horizontal positions, where a minimum tensile strength of 90,000 psi is required in the deposited weld metal.
- The recommended shielding gas is 90% Argon- 10% CO₂. Other Ar-CO₂ mixtures may be employed, with a minimum of 75-80% argon.
- Select 90C-M2 is an ideal choice for joining low alloy, high strength steels such as HY-80, A514 and A710.
- Earthmoving equipment, mining trucks and machinery, and heavy equipment trailers are some areas where this electrode may be utilized.
- Ideal for those applications where the slag residue and fume emissions of flux cored electrodes are unwanted.

CONFORMANCES

AWS A5.28	E90C-K3-H4
ASME SFA 5.28	E90C-K3-H4

DIAMETERS (in [mm])

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

POSITIONS



SHIELDING GAS

90% Ar / 10% CO₂

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
90%Ar / 10%CO ₂	0.05	0.08	0.05	1.26	0.40	1.52	0.005	0.009	0.18	0.01

TYPICAL MECHANICAL PROPERTIES

Shielding Gas	Tensile Strength ksi (MPa)	Yield Strength ksi (MPa)	Elongation (%)	Weld Condition	PWHT Temp	CVN @ -20°F (-30°C) ft-lb (J)	CVN @ -60°F (-50°C) ft-lb (J)
90%Ar / 10%CO ₂	96 (662)	85 (586)	22	As-Welded	-	31 (42)	21 (28)



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.

600 Enterprise Drive, P.O. Box 259, Fort Loramie, Ohio 45845-0259 • 800-341-5215 • www.Select-Arc.com

RECOMMENDED WELDING PARAMETERS **

Diameter in (mm)	Shielding Gas	Position	WFS* in/min (m/min)	Amps	Volts	CTWD* in (mm)
0.045 (1.2 mm)	90% Ar/10% CO2	Flat & Horizontal	260 (6.6)	200	24	1/2 - 5/8 (13 - 16)
		Flat & Horizontal	305 (7.7)	220	25	1/2 - 5/8 (13 - 16)
		Flat & Horizontal	360 (9.1)	240	26.5	5/8 - 3/4 (16 - 19)
		Flat & Horizontal	405 (10.3)	255	28	5/8 - 3/4 (16 - 19)
0.052 (1.3 mm)	90% Ar/10% CO2	Flat & Horizontal	235 (6.0)	215	24	5/8 - 3/4 (16 - 19)
		Flat & Horizontal	315 (8.0)	260	25	5/8 - 3/4 (16 - 19)
		Flat & Horizontal	330 (8.4)	275	26.5	3/4 - 1 (19 - 25)
		Flat & Horizontal	345 (8.8)	295	28	3/4 - 1 (19 - 25)
1/16 (1.6 mm)	90% Ar/10% CO2	Flat & Horizontal	200 (5.1)	250	24	5/8 - 3/4 (16 - 19)
		Flat & Horizontal	245 (6.2)	290	25	5/8 - 3/4 (16 - 19)
		Flat & Horizontal	275 (7.0)	310	26.5	3/4 - 1 (19 - 25)
		Flat & Horizontal	285 (7.2)	330	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.

APPROVALS

Agency	Approval	Shielding Gas	Diameter(s) in (mm)
CWB CSA W48-23	E620T15-M20A5-K3-H4 (E62C-K3-H4)	M20 (90%Ar / 10%CO2)	0.045 (1.2) - 1/16 (1.6)

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.



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.