

Select 90C-B3

Low Alloy / Gas Shielded / Metal Cored

PRODUCT DATA SHEET

FEATURES

- Intended for welding of 2.25% Cr - 1 Mo steels used in high temperature and pressure piping (ASTM A335), as well as pressure vessels (ASTM A387 Gr.22)
- True, smooth spray transfer.
- Greater tolerance for mill scale compared to solid electrodes

CONFORMANCES

AWS A5.28

E90C-B3-H16

DIAMETERS (in [mm])

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

POSITIONS



SHIELDING GAS

98%Ar / 2%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
98%Ar / 2%O ₂	0.08	2.1	0.04	0.85	1.14	0.03	0.006	0.011	0.42	0.006

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 @ 70°F (21°C) ft-lb (J)
98%Ar / 2%O ₂	100 (690)	80 (552)	22	PWHT	1275°F for 1 hr	40 (54)	66 (89)



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)	98% Ar/2% O ₂	Flat & Horizontal	260 (6.6)	200	22	1/2" - 5/8" (0 - 0)
		Flat & Horizontal	305 (7.7)	220	23	1/2" - 5/8" (0 - 0)
		Flat & Horizontal	360 (9.1)	240	24.5	5/8" - 3/4" (0 - 0)
		Flat & Horizontal	405 (10.3)	255	26	5/8" - 3/4" (0 - 0)
0.052 (1.3 mm)	98% Ar/2% O ₂	Flat & Horizontal	235 (6.0)	215	22	5/8" - 3/4" (0 - 0)
		Flat & Horizontal	315 (8.0)	260	23	5/8" - 3/4" (0 - 0)
		Flat & Horizontal	330 (8.4)	275	24.5	3/4" - 1" (0 - 0)
		Flat & Horizontal	345 (8.8)	295	26	3/4" - 1" (0 - 0)
1/16 (1.6 mm)	98% Ar/2% O ₂	Flat & Horizontal	200 (5.1)	250	22	5/8" - 3/4" (0 - 0)
		Flat & Horizontal	245 (6.2)	290	23	5/8" - 3/4" (0 - 0)
		Flat & Horizontal	275 (7.0)	310	24.5	3/4" - 1" (0 - 0)
		Flat & Horizontal	285 (7.2)	330	26	3/4" - 1" (0 - 0)

* 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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