

Select 70C-6

Carbon Steel / Gas Shielded / Metal Cored

PRODUCT DATA SHEET

FEATURES

- Tubular construction promotes faster travel speeds and better fusion than solid GMAW electrodes
- High level of deoxidizers enhances welding over hot rolled and rusted plate material
- Intended for welding carbon steels, such as ASTM A36, A515, A516 and A572
- Smaller diameters (1/16" or smaller) can be pulse welded in all positions (call in for parameter recommendations)
- The versatility of a slag free cored wire makes this ideal for general fabrication, structural steel welds, and thin section applications, such as automotive components and hot water heaters

CONFORMANCES

AWS A5.18	E70C-6M-H4
AWS A5.36	E70T15-M20A2-CS1-H4 E70T15-M21A2-CS1-H4
ASME SFA 5.18	E70C-6M-H4
AWS D1.8	0.045 in (1.2 mm), (75% Ar/25% CO ₂) 0.045 in (1.2 mm), (85% Ar/15% CO ₂) 0.045 in (1.2 mm), (90% Ar/10% CO ₂) 0.052 in (1.3 mm), (85% Ar/15% CO ₂) 0.052 in (1.3 mm), (90% Ar/10% CO ₂) 1/16 in (1.6 mm), (85% Ar/15% CO ₂) 1/16 in (1.6 mm), (90% Ar/10% CO ₂)

DIAMETERS [in (mm)]

0.035 (0.9), 0.045 (1.2), 0.052 (1.3), 1/16 (1.6), 5/64 (2.0), 3/32 (2.4)

POSITIONS



SHIELDING GAS

75-95%Ar/Balance 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
75%Ar / 25%CO ₂	0.06	0.04	0.04	1.55	0.00	0.02	0.010	0.010	0.66	0.00
85%Ar / 15%CO ₂	0.05	0.03	0.04	1.62	0.00	0.01	0.012	0.008	0.83	0.00
92%Ar / 8%CO ₂	0.05	0.02	0.04	1.73	0.00	0.01	0.010	0.008	0.89	0.00

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)
75%Ar / 25%CO ₂	87 (601)	79 (544)	25	As-Welded	-	46 (62)
85%Ar / 15%CO ₂	89 (614)	74 (510)	28	As-Welded	-	21 (28)
92%Ar / 8%CO ₂	92 (634)	78 (538)	27	As-Welded	-	28 (38)



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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	25	1/2 - 5/8 (13 - 16)
		Flat & Horizontal	425 (10.8)	190	26	1/2 - 5/8 (13 - 16)
		Flat & Horizontal	475 (12.1)	210	27.5	5/8 - 3/4 (16 - 19)
		Flat & Horizontal	570 (14.5)	225	29	5/8 - 3/4 (16 - 19)
0.045 (1.2 mm)	75% Ar/25% CO2	Flat & Horizontal	260 (6.6)	200	25	1/2 - 5/8 (13 - 16)
		Flat & Horizontal	305 (7.7)	220	26	1/2 - 5/8 (13 - 16)
		Flat & Horizontal	360 (9.1)	240	27.5	5/8 - 3/4 (16 - 19)
		Flat & Horizontal	405 (10.3)	255	29	5/8 - 3/4 (16 - 19)
0.052 (1.3 mm)	75% Ar/25% CO2	Flat & Horizontal	235 (6.0)	215	25	5/8 - 3/4 (16 - 19)
		Flat & Horizontal	315 (8.0)	260	26	5/8 - 3/4 (16 - 19)
		Flat & Horizontal	330 (8.4)	275	27.5	3/4 - 1 (19 - 25)
		Flat & Horizontal	345 (8.8)	295	29	3/4 - 1 (19 - 25)
1/16 (1.6 mm)	75% Ar/25% CO2	Flat & Horizontal	200 (5.1)	250	25	5/8 - 3/4 (16 - 19)
		Flat & Horizontal	245 (6.2)	290	26	5/8 - 3/4 (16 - 19)
		Flat & Horizontal	275 (7.0)	310	27.5	3/4 - 1 (19 - 25)
		Flat & Horizontal	285 (7.2)	330	29	3/4 - 1 (19 - 25)
5/64 (2.0 mm)	75% Ar/25% CO2	Flat & Horizontal	170 (4.3)	350	25	3/4 - 1 (19 - 25)
		Flat & Horizontal	185 (4.7)	370	26	3/4 - 1 (19 - 25)
		Flat & Horizontal	210 (5.3)	400	28	1 - 1 1/4 (25 - 32)
		Flat & Horizontal	255 (6.5)	415	29	1 - 1 1/4 (25 - 32)
3/32 (2.4 mm)	75% Ar/25% CO2	Flat & Horizontal	125 (3.2)	370	25	3/4 - 1 (19 - 25)
		Flat & Horizontal	140 (3.6)	390	26	3/4 - 1 (19 - 25)
		Flat & Horizontal	160 (4.1)	425	28	1 - 1 1/4 (25 - 32)
		Flat & Horizontal	185 (4.7)	450	29	1 - 1 1/4 (25 - 32)

* 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.

At higher levels of argon the voltage should be gradually decreased; 0.5-1 volt for 85% Ar/15% CO2, 1-1.5 volts for 90% Ar/10% CO2 and 1-2 volts for 95% Ar/5% CO2.

APPROVALS

Agency	Approval	Shielding Gas	Diameter(s) in (mm)
ABS	2YSA	M21 (75%Ar / 25%CO2)	0.035 (0.9) - 1/16 (1.6)
Chrysler MS-90024/01	W103	M21 (75%Ar / 25%CO2)	0.035 (0.9) - 1/16 (1.6)
CWB CSA W48-23	E491T15-C1A3-CS1-H4	C1 (100%CO2)	0.035 (0.9) - 1/16 (1.6)
	E491T15-M21A3-CS1-H4	M21 (75%Ar / 25%CO2)	0.035 (0.9) - 1/16 (1.6)
	E491T15-M20A3-CS1-H4	M20 (92%Ar / 8%CO2)	0.035 (0.9) - 1/16 (1.6)
DNV	II YMS (H5)	M21 (75%Ar / 25%CO2)	0.035 (0.9) - 1/16 (1.6)
LLOYDS	2YS (H5)	M21 (75%Ar / 25%CO2)	0.045 (1.2) - 1/16 (1.6)



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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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