

# Select 70C-LMn

Carbon Steel / Gas Shielded / Metal Cored

PRODUCT DATA SHEET

## FEATURES

- Designed for single or multiple pass welding on steels requiring a minimum of 70,000 psi tensile strength.
- Designed to produce cleaner weld deposits than conventional metal cored electrodes, thus allowing for minimal slag islands and the ability to deposit multiple beads without cleaup between passes.
- Arc transfer is a stable, fine droplet spray.
- Total manganese (Mn) content is significantly reduced compared to standard E70C-6 or E70S-6 AWS classed electrodes.
- Ideal for welding structural steel, thin plate fabrication, general fabrication, and welding of thin-walled tanks applications where ASTM A36, A285, A515-Gr 70, and A516-Gr 70 type materials are being used.

## CONFORMANCES

AWS A5.18	E70C-6M
AWS A5.36	E71T15-GA3-CS1 E71T15-M20A3-CS1 E71T15-M21A3-CS1
ASME SFA 5.18	E70C-6M

## DIAMETERS (in [mm])

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

## POSITIONS



## SHIELDING GAS

75-92% Ar / Balance CO<sub>2</sub>  
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 <sub>2</sub>	0.06	0.04	0.08	0.55	0.004	0.40	0.010	0.010	0.62	0.002
92%Ar / 8%CO <sub>2</sub>	0.06	0.04	0.08	0.60	0.006	0.40	0.010	0.010	0.71	0.002

## 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 <sub>2</sub>	79 (545)	66 (455)	26	As-Welded	-	61 (83)
92%Ar / 8%CO <sub>2</sub>	85 (586)	71 (490)	27	As-Welded	-	61 (83)



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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)
0.045 (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)

\* 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 92% Ar/8% CO2.

## APPROVALS

Agency	Approval	Shielding Gas	Diameter(s) in (mm)
CWB CSA W48-23	E491T15-M21A3-CS1-H4	M21 (75%Ar / 25%CO2)	0.045 (1.2) - 1/16 (1.6)
	E491T15-GA3-CS1-H4	M14 (Arcal 14)	0.045 (1.2) - 1/16 (1.6)
		G (Gas Mixture*)	0.045 (1.2) - 1/16 (1.6)

\* G - Gas mixtures containing components not listed, or mixtures outside the composition range listed in AWS A5.32 (ISO 14175). Two gas mixtures with the same G - classification may not be interchangeable. For more details see approval website or contact Select-Arc.

## 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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