

# Select 720 Low Mn

Carbon Steel / Gas Shielded / Flux Cored

PRODUCT DATA SHEET

## FEATURES

- Superb weldability, designed for ease of welding in all positions
- Total manganese (Mn) content is significantly reduced compared to standard E71T-1/-9 electrodes.
- Mechanical properties meet industry requirements and exceed competitive low manganese type wires of same AWS classification.
- Intended for use with 75-85% Ar/balance CO<sub>2</sub> shielding gas.
- Excels in general fabrication, structural steel, and shipbuilding applications where ASTM A36, A515-gr 70, and A516-gr 70 type materials are being used.

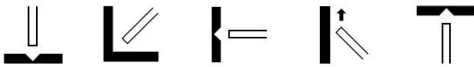
## CONFORMANCES

<b>AWS A5.20</b>	E71T-1M E71T-9M
<b>ASME SFA 5.20</b>	E71T-1M E71T-9M
<b>AWS A5.36</b>	E71T1-M20A2-CS1 E71T1-M21A2-CS1

## DIAMETERS (in [mm])

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

## POSITIONS



## SHIELDING GAS

75-85% 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>	0.05	0.06	0.29	0.50	0.00	0.45	0.004	0.010	0.56	0.02
85%Ar / 15%CO <sub>2</sub>	0.05	0.04	0.26	0.55	0.00	0.46	0.008	0.010	0.61	0.02

## TYPICAL MECHANICAL PROPERTIES

Shielding Gas	Tensile Strength ksi (MPa)	Yield Strength ksi (MPa)	Elongation (%)	Weld Condition	PWHT Temp	CVN @ 0°F (-20°C) ft-lb (J)	CVN @ -20°F (-30°C) ft-lb (J)
75%Ar / 25%CO <sub>2</sub>	81 (559)	70 (483)	28	As-Welded	-	97 (132)	53 (72)
85%Ar / 15%CO <sub>2</sub>	89 (614)	77 (531)	24	As-Welded	-	53 (72)	36 (49)



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.

## 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	All Positions	200 (5.1)	145	23	1/2 - 5/8 (13 - 16)
		All Positions	235 (6.0)	160	24	1/2 - 5/8 (13 - 16)
		All Positions	300 (7.6)	185	26	1/2 - 5/8 (13 - 16)
		Flat & Horizontal	375 (9.5)	215	27	5/8 - 3/4 (16 - 19)
		Flat & Horizontal	440 (11.2)	235	29	5/8 - 3/4 (16 - 19)
0.052 (1.3 mm)	75% Ar/25% CO2	All Positions	170 (4.3)	155	23	5/8 - 3/4 (16 - 19)
		All Positions	200 (5.1)	175	24	5/8 - 3/4 (16 - 19)
		All Positions	250 (6.4)	225	26	5/8 - 3/4 (16 - 19)
		Flat & Horizontal	310 (7.9)	250	27	3/4 - 1 (19 - 25)
		Flat & Horizontal	395 (10.0)	280	29	3/4 - 1 (19 - 25)
1/16 (1.6 mm)	75% Ar/25% CO2	All Positions	125 (3.2)	165	23	5/8 - 3/4 (16 - 19)
		All Positions	150 (3.8)	195	24	5/8 - 3/4 (16 - 19)
		All Positions	185 (4.7)	225	26	5/8 - 3/4 (16 - 19)
		Flat & Horizontal	265 (6.7)	280	27	3/4 - 1 (19 - 25)
		Flat & Horizontal	325 (8.3)	320	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 decreased; ½-1 volt for 85% Ar/15% CO2

## APPROVALS

Agency	Approval	Shielding Gas	Diameter(s) in (mm)
CWB CSA W48-23	E491T1-M21A3-CS1-H8	M21 (75%Ar / 25%CO2)	0.045 (1.2) - 1/16 (1.6)
	E491T1-M20A3-CS1-H8	M20 (85%Ar / 15%CO2)	0.045 (1.2) - 1/16 (1.6)
	E491T1-GA3-CS1-H8	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-SAI.

## 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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