

## Select 720HP

### Description :

- A carbon steel, gas shielded, flux cored electrode for welding in all positions
- Designed for single and multiple pass welding of carbon steels, such as ASTM A36, A285, A515-Gr 70, and A516-Gr 70
- Developed to weld with 100% CO<sub>2</sub> and 75-80% Ar/balance CO<sub>2</sub>
- The arc transfer is a small droplet spray with an argon blend and small to medium droplet with CO<sub>2</sub>
- Microalloying and slag adjustments provide enhanced CVN toughness values at lower than required classification temperatures
- Fume generation rates are lower than conventional E71T-1 electrodes
- Well suited for structural welding and general fabrication
- A good choice for fine grained, high toughness steels, such as ASTM A572 and A633.
- Typical applications are mining machinery, draglines frames, railcar construction, and shipbuilding

### Classifications & Approvals:

- E71T-1MJ, E71T-1CJ, E71T-9MJ, E71T-9CJ, E71T-12MJ and E71T-12CJ per AWS A5.20, ASME SFA 5.20
- E71T1-M21A4-CS2 and E71T1-C1A4-CS2 per AWS A5.36, ASME A5.36
- ABS 3YSA (100% CO<sub>2</sub> and 75% Ar/25% CO<sub>2</sub>), DNV III YMS (100% CO<sub>2</sub>), DNV IV YMS (75% Ar/25% CO<sub>2</sub>), Lloyd's 4YS-H10 (75% Ar/25% CO<sub>2</sub>)
- CWB; E491T1-C1A4-CS2-H4 (E491T-12J-H4) per AWS A5.36M (A5.20M), E491T-12MJ-H4 (Ar + 20-25% CO<sub>2</sub>) per AWS A5.20M

### Typical Mechanical Properties:

	<u>75-80% Ar/balanceCO<sub>2</sub></u>	<u>100% CO<sub>2</sub></u>
Ultimate Tensile Strength (psi)	88,000	81,500
Yield Strength (psi)	76,000	66,700
Percentage Elongation	28	28
CVN (ft • lb) @ 0° F	101	110
@ -20° F	85	95
@ -40° F	65	70
@ -50° F	40	37

### Typical Weld Deposit Composition (wt%):

<u>Shielding Gas</u>	<u>C</u>	<u>Mn</u>	<u>P</u>	<u>S</u>	<u>Si</u>	<u>Ni</u>
75-80% Ar/balance CO <sub>2</sub>	.06	1.51	.009	.009	.47	.41
100% CO <sub>2</sub>	.06	1.30	.009	.009	.42	.39

### Recommended Welding Parameters (CO<sub>2</sub>\*):

Diameter	Position	Optimum			Range		CTWD
		Amperage	WFS	Voltage	Amperage	Voltage	
1/16"	Flat	350	350	28	150-400	22-33	1" - 1 1/4"
	V-Up/OH	225	180	25	150-310	22-28	
.052"	Flat	300	440	27	100-330	19-31	3/4" - 1"
	V-Up/OH	200	245	25	150-310	21-28	
.045"	Flat	250	450	27	100-300	21-31	3/4" - 1"
	V-Up/OH	190	305	25	150-280	21-29	

\*For 75-80% Ar/balanceCO<sub>2</sub> shielding gas, decrease voltage by 1 to 1.5 volts

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**Notice:** 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.