



120T5-K4

Classification: E120T5-K4C per ANSI/AWS A5.29, SFA 5.29

Description: 120T5-K4 is a low alloy steel electrode for flux cored arc welding with external gas-shielding. This electrode is intended for flat and horizontal fillet welding of certain low alloy steels where a minimum tensile strength of 120,000 psi and good low temperature notch toughness are required. Carbon dioxide is the recommended shielding gas, with a suggested flow rate of 35-50 cfh and a minimum dew point of -40 degrees F.

Characteristics: 120T5-K4 is a flux cored electrode with a basic slag system, which provides better mechanical properties and diffusible hydrogen levels in the weld deposit than T-1 (rutile) slag systems. The arc transfer is globular in nature, producing more spatter than the T-1 slag systems. However, the welding performance of SELECT 125-K4 is much improved over the usual T-5 types; in fact, the slag removal and bead geometry are quite similar to those of E12018 electrodes. The viscosity of the lime-fluoride slag limits welding of this electrode to the flat and horizontal positions.

Applications: 120T5-K4 produces a tough, high strength, weld metal that is resistant to cracking in highly restrained joints. These characteristics make it an ideal selection to weld high strength, low alloy steels such as T-1, HY-100, ASTM A514 and others of similar strength. It may also be used for the repair of high strength castings.

Typical Mechanical Properties:

	All Weld Metal As Welded
Ultimate Tensile Strength (psi)	132,100
Yield Strength (psi)	116,000
Percent Elongation	15
CVN (ft·lb f) @ -60° F	33

Typical Weld Deposit Chemistry:

<u>Wt%</u>	<u>C</u>	<u>Mn</u>	<u>P</u>	<u>S</u>	<u>Si</u>	<u>Ni</u>	<u>Mo</u>	<u>Cr</u>
	0.04	1.90	0.010	0.010	0.42	2.27	0.60	0.57

Suggested Welding Parameters:

<u>Diameter</u>	<u>Position</u>	<u>Optimum</u>			<u>Range</u>	
		<u>Amperage</u>	<u>Voltage</u>	<u>WFS</u>	<u>Amperage</u>	<u>Voltage</u>
3/32"	Flat/Horizontal	400	28	175	350-550	26-34
1/16"	Flat/Horizontal	300	29	320	250-450	27-33
.045"	Flat/Horizontal	250	28	380	120-320	22-31

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.

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