



Smoothcor 110T1-K3M

Classification:

E111T1-K3M, per AWS/ANSI A5.29, SFA 5.29.

Description:

Smoothcor 110T1-K3M is a low alloy steel, flux cored electrodes designed for use with external gas shielding. This electrode is intended for single and multiple pass welding, in all positions, of low alloy steels, requiring 110,000 psi minimum tensile strength in the weld deposit. The preferred shielding gas for **Smoothcor 110T1-K3M** is 75-80% argon – balance carbon dioxide. Recommended gas flow rates are 35- 50 cfh, and welding grade carbon dioxide should be used with a dew point of at least -40° F.

Characteristics:

Smoothcor 110T1-K3M is a premium low alloy steel, flux cored electrodes, with a rutile based slag systems. This product operates in a spray-like transfer, with low spatter and good welder appeal. The fast freezing slag facilitates welding in all positions. There is moderate slag volume, with complete coverage, and easy removal. Mechanical properties are quite good, with excellent CVN toughness at subzero temperatures. Weld composition matches that of E11018-M covered electrodes.

Applications:

Smoothcor 110T1-K3M is a superb choice for those applications requiring 110 KSI minimum tensile strength and good charpy v-notch toughness, such as when welding HY-80, certain grades of A514, and HSLA-80 steels. These materials are used in crane fabrication, trailer construction, and other structural applications involving higher strength materials.

Typical Mechanical Properties:

	All Weld Metal
	<u>As Welded</u>
Ultimate Tensile Strength (psi)	115,300
Yield Strength (psi)	110,300
Percent Elongation	18
CVN (ft-lb^{1/2}) @ 0° F	61.3

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>Cr</u>	<u>Mo</u>
	0.05	1.70	0.008	0.010	0.30	1.87	0.04	0.31

Typical Welding Parameters:

<u>Diameter</u>	<u>Position</u>	<u>Optimum</u>			<u>Range</u>	
		<u>Amperage</u>	<u>WFS</u>	<u>Voltage</u>	<u>Amperage</u>	<u>Voltage</u>
1/16"	Flat	350	300	28	150-400	21-33
	Overhead	225	160	27	150-310	21-28
	Vertical up	225	160	24	150-280	21-26
.052"	Flat	300	360	27	100-330	18-31
	Overhead	225	245	25	150-310	20-27
	Vertical up	225	245	24	150-280	20-26
.045"	Flat	250	282	27	100-300	20-31
	Overhead	200	265	25	150-280	20-28
	Vertical up	200	265	24	100-230	20-27

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.