



Smoothcor® 110T1-K3M

Classification: AWS A5.29/ASME SFA 5.29 E111T1-K3MJ-H8

Description: Smoothcor® 110T1-K3M is designed for single and multiple pass welding, in all positions, of specific high strength, low alloys steels that require 110,000 psi. They are ideal choices for matching tensile strength of specific base metals such as ASTM A514 and HY-100. These steels are used in the fabrication of cranes, trailers and boom assemblies. Smoothcor® 110T1-K3M operates in a spray-like transfer, with a smooth stable arc 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. They produce high strength weldments with good low temperature CVN impact properties. The J (E111T1-K3MJ) designation represents extra low temperature toughness

Shielding gas: 75-80% Ar/Balance CO₂

Typical Weld Deposit Chemistry: %

C	Mn	P	S	Si	Ni	Mo	Cr	V
.07	1.82	.005	.003	.39	1.81	.38	.06	.014

Typical Mechanical Properties: (All weld metal as welded)

Tensile Strength	117,400 psi
Yield Strength	111,600 psi
Elongation	22%
CVN (ft•lb f @ -40°F)	32

Recommended Welding Parameters - DCEP

Diameter	Position	Operating Range		Optimum			
		Amps	Volts	Amps	WFS (ipm)	Volts	ESD
.045"	Flat	130-330	21-32	250	450	27	½" - 1"
	Overhead	150-280	21-30	190	305	25	½" - 1"
	Vertical up	130-260	21-29	200	305	24	½" - 1"
.052"	Flat	140-330	19-32	275	400	27	½" - 1"
	Overhead	150-290	21-28	200	245	26	½" - 1"
	Vertical up	140-270	21-27	200	245	24	½" - 1"
1/16"	Flat	150-400	22-34	330	330	28	½" - 1"
	Overhead	150-310	22-28	225	180	25	½" - 1"
	Vertical up	150-280	22-27	225	180	24	½" - 1"

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 purpose with respect to its products.