



# Smoothcor 71T-1/T-9

## Classifications:

E71T-1C, E71T-1M, E71T-9C, E71T-9M per ANSI/AWS A5.20, SFA 5.20.

## Approvals:

ABS 3SA-3YSA, (CO<sub>2</sub>/C<sub>25</sub>); DNV 3 YMS, (CO<sub>2</sub>)

## Description:

**Smoothcor 71T1/T9** is a flux cored, gas-shielded electrode intended for single and multiple pass welding of carbon steels in all positions. This electrode is designed for use with 100% carbon dioxide and 75-80 percent argon / balance carbon dioxide shielding gas mixtures. Welding grade gases should be utilized, with dew points of at least -40 degrees F and flow rates of 35-50 cfh.

## Characteristics:

**Smoothcor 71T1/T9** is a product formulated to provide improved deposition rates and enhanced welder appeal, compared to conventional rutile cored wires. Fume emission and spatter levels are greatly reduced, and bead geometry is superior to conventional E71T-1C's. The fast freezing slag facilitates all position welding, yet allows the welder to deposit smooth, flat, horizontal fillets. The use of microalloying and special fluxing ingredients produces enhanced CVN toughness at lower temperatures, when compared to cored wires of conventional rutile slag systems.

## Applications:

This general purpose cored wire is a superb selection for welding carbon steels requiring a minimum tensile strength of 70,000 psi. The combination of strength and toughness, along with fume generation rates reduced by 50 percent or more over conventional E71T-1C electrodes, make it ideal for applications such as structural steel, farm machinery, construction equipment, railcar fabrication and shipbuilding, where the following steels may be employed; ASTM A131, A285, A515 Gr 70, A516 Gr 70.

## Typical Mechanical Properties:

	CO <sub>2</sub>	75Ar-25CO <sub>2</sub>
Ultimate Tensile Strength (psi)	89,100	90,600
Yield Strength (psi)	78,100	82,700
Percent Elongation	26.3	25.3
CVN (ft•lb f)		
@ 0°F	85	70
@ -20°F	70	45

## Typical Deposit Composition:

Wt%	C	Mn	Si	P	S
CO <sub>2</sub>	0.05	1.39	0.56	.008	.010
75Ar-25CO <sub>2</sub>	0.05	1.61	0.64	.005	.010

## Typical Welding Parameters - CO<sub>2</sub>\*:

Diameter	Position	Optimum			Range	
		Amperage	WFS	Voltage	Amperage	Voltage
1/16"	Flat	350	300	29	150-400	22-34
	Overhead	225	160	26	150-310	22-28
	Vertical up	225	160	25	150-280	22-27
.052"	Flat	300	360	28	100-330	19-32
	Overhead	225	245	26	150-310	21-28
	Vertical up	225	245	25	150-280	21-27
.045"	Flat	250	410	28	100-300	21-32
	Overhead	200	265	26	150-280	21-29
	Vertical up	200	265	25	100-230	21-28
.035"	Flat	175	511	26	100-250	21-30
	Overhead	150	490	24	100-175	21-26
	Vertical up	150	490	24	100-175	21-26

\* For 75Ar-25CO<sub>2</sub> shielding gas lower the voltage by 1 to 1.5 volts.