SA 71T-9

Description :

- A carbon steel, gas shielded, flux cored electrode for welding in all positions
- Designed to be used with both CO_2 and 75-80% Ar/Balance CO_2 shielding gases
- Intended for welding carbon steel plate, such as ASTM A36, A285, A515-Gr70, and A516-Gr70
- The arc transfer is a smooth spray, on both CO_2 and 75-80% Ar/Balance CO_2
- Slag removal and bead geometry are competitive with any of the all position wires sold commercially
- Typical applications are welding of railcars, bridge structures, steel structures, and general fabrication

Classifications & Approvals:

- E71T-9C-H8 and E71T-9M-H8 per AWS A5.20, ASME SFA 5.20
- E71T1-C1A2-CS1-H8 and E71T1-M21A2-CS1-H8 per AWS A5.36, ASME SFA 5.36
- ABS-3YSA (H10) .045", .052", 1/16" for 100% CO_2 and 75-80% Argon/Balance CO_2
- AWS D1.8:2016 .045", .052", 1/16" for 100% CO_2 and 75-80% Argon/Balance CO_2

Typical Mechanical Properties:

	100%CO_2	75%Ar/25%CO_2
Ultimate Tensile Strength (psi)	84,000	88,000
Yield Strength (psi)	71,000	79,000
Percent Elongation	28	27
CVN (ft • lb *f*) @ -20° F	53	82

Typical Weld Deposit Composition (wt%):

Shielding Gas	C	Mn	P	S	Si
100%CO_2	.04	1.15	.011	.010	.46
75%Ar/25%CO_2	.05	1.40	.011	.010	.63

Recommended Welding Parameters (CO_2*):

Diameter	Weld Position	Amps	Volts	Wire-Feed Speed (in/min)	Contact Tip to Work Distance
.045"	All-Position	145	23	200	1/2" - 5/8"
	All-Position	160	24	235	
	All-Position	185	26	300	
	Flat & Horizontal	215	27	375	5/8" - 3/4"
	Flat & Horizontal	235	29	440	
.052"	All-Position	155	23	170	5/8" -3/4"
	All-Position	175	24	200	
	All-Position	225	26	250	
	Flat & Horizontal	250	27	310	3/4" - 1"
	Flat & Horizontal	280	29	395	
1/16"	All-Position	165	23	125	5/8" -3/4"
	All-Position	195	24	150	
	All-Position	225	26	185	
	Flat & Horizontal	280	27	265	3/4" - 1"
	Flat & Horizontal	320	29	325	

*For 75-80%Ar-Balance CO_2 shielding gas, decrease voltage by 1 to 1.5 volts

Rev 2 (5/27/21)

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.