

# TRU-CORE™ FC 71T

AWS E71T-1C H8, E71T-1M H8, E71T-9C H8, E71T-9M H8



## PRODUCT DESCRIPTION:

Tru-Core FC 71T is a flux cored, gas shielded, all-position electrode intended to weld carbon steel, as well as certain low alloy steels, where a minimum tensile strength of 70,000 psi is required. Tru-Core FC 71T is intended for single and multiple pass welding using 100% CO<sub>2</sub> or 75-80% Argon/balance CO<sub>2</sub> mixtures, for welding in all positions. Major advantages of this electrode include deep penetration, smooth stable arc transfer, low spatter levels and a slag system specially formulated for a high melting point. This provides a very quick freezing slag.

**Flux Cored, Gas Shielded,  
Carbon Steel Electrode**

## CLASSIFICATIONS & APPROVALS:

- AWS A5.20: E71T-1C H8, E71T-1M H8, E71T-9C H8, E71T-9M H8
- ASME SFA 5.20: E71T-1C H8, E71T-1M H8, E71T-9C H8, E71T-9M H8
- CWB W48-06: E491T-9-H8

PRODUCT FEATURES	
Flat bead geometry	Excellent feedability
Easy slag removal	Smooth arc transfer
Excellent mechanical properties	

## TYPICAL APPLICATIONS :

Tru-Core FC 71T can be used for welding most carbon steels and certain low alloy steels. It is ideal for welding gauges varying from 10 gauge sheet metal to heavy plate sections. Some examples are:

- Structural Steel
- Heavy Equipment
- Railcar Construction
- Mining Machinery
- General Fabrication

## MANUFACTURING ADVANTAGES:

- Patented forming, feeding and drawing equipment
- Consistent strip-to-core ratio
- Precise thermal treatment that controls the type, amount and uniformity of surface oxides on the wire
- Consistent diffusible hydrogen levels

## TYPICAL APPLICATION SHIELDING GAS BLENDS:

- 75% Argon/25% CO<sub>2</sub>
- 100% CO<sub>2</sub>
- Flow Rate: 35-45 CFH

## WIRE DIAMETERS (in):

.045	.052	.062
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## WELDING POSITIONS:

All position welding is possible when using the correct shielding gas blends, welding process and parameters.

	AWS/ASME REQ.	100% CO <sub>2</sub>	75% Ar / 25% CO <sub>2</sub>
<b>TYPICAL WELD METAL COMPOSITION</b>			
<b>CARBON (C)</b>	0.12 (max.)	0.04	0.05
<b>MANGANESE (Mn)</b>	1.75 (max.)	1.54	1.41
<b>SILICON (Si)</b>	0.90 (max.)	0.41	0.45
<b>SULPHUR (S)</b>	0.03 (max.)	0.008	0.010
<b>PHOSPHORUS (P)</b>	0.03 (max.)	0.010	0.009
<b>CHROMIUM (Cr)</b>	0.20 (max.)	0.06	0.03
<b>NICKEL (Ni)</b>	0.50 (max.)	0.02	0.02
<b>MOLYBDENUM (Mo)</b>	0.30 (max.)	0.01	0.002
<b>VANADIUM (V)</b>	0.08 (max.)	0.016	0.017
<b>COPPER (Cu)</b>	0.35 (max.)	0.06	0.06
<b>TYPICAL MECHANICAL PROPERTIES</b>			
<b>TENSILE STRENGTH (ksi)</b>	70 – 95	83.6	80.8
<b>YIELD STRENGTH (ksi)</b>	58 (min.)	72.7	68.4
<b>ELONGATION (% IN 2")</b>	22 (min.)	29	29
<b>CVN @ -20°F (-29°C)</b>	20 ft-lbf	54.3 ft-lbf	41.6 ft-lbf
<b>TYPICAL DIFFUSIBLE HYDROGEN – AWS A4.3 REQUIREMENTS</b>			
<b>ml/100g</b>	4.0 (max.)	2.2	3.2



**APPROXIMATE WELDING PARAMETERS: FLUX CORED WIRE-ALL POSITIONS**

DIAMETER (in)	POLARITY	AMPERAGE		VOLTAGE		WIRE FEED SPEED (in/min)		CTWD (in)	SHIELDING GAS
		Min.	Max.	Min.	Max.	Min.	Max.		
.045	DCEP	145	200	23	25	270	330	5/8	100% CO <sub>2</sub> or 75-80% Argon/Balance CO <sub>2</sub>
.052	DCEP	150	215	24	26	200	245	5/8	100% CO <sub>2</sub> or 75-80% Argon/Balance CO <sub>2</sub>
1/16 (.062)	DCEP	165	220	24	26	130	160	3/4	100% CO <sub>2</sub> or 75-80% Argon/Balance CO <sub>2</sub>

**APPROXIMATE WELDING PARAMETERS: FLUX CORED WIRE-FLAT AND HORIZONTAL POSITIONS**

DIAMETER (in)	POLARITY	AMPERAGE		VOLTAGE		WIRE FEED SPEED (in/min)		CTWD (in)	SHIELDING GAS
		Min.	Max.	Min.	Max.	Min.	Max.		
.045	DCEP	120	270	23	28	200	500	5/8	100% CO <sub>2</sub> or 75-80% Argon/Balance CO <sub>2</sub>
.052	DCEP	160	315	24	29	225	425	5/8	100% CO <sub>2</sub> or 75-80% Argon/Balance CO <sub>2</sub>
1/16 (.062)	DCEP	260	360	25	30	250	325	3/4	100% CO <sub>2</sub> or 75-80% Argon/Balance CO <sub>2</sub>

PACKAGES
33-lb. Fiber Spool - Random Wound
50-lb. Fiber Spool - Random Wound
60-lb. Coil - Random Wound
500-lb. Drum Pack
500-lb. Smart Pak™ - 100% Recyclable
600-lb. Drum Pack
600-lb. Smart Pak™ - 100% Recyclable
600-lb. Wood Reel
600-lb. Tru-Trac®

Note: See "Premium Packaging Options" for full description of packages. For additional packages, please contact NS Customer Service at 1-800-777-1618.

Exclusive to NS customers.

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