

TRU-CORE™ FC 71T-AG
AWS E71T-1M H8, E71T-9M H8



PRODUCT DESCRIPTION:

Tru-Core FC 71T-AG is a flux cored, gas shielded, all-position electrode, designed specifically for use with gas mixtures of from 75% to 80% Argon/balance CO₂. Tru-Core FC 71T-AG is intended for single and multiple pass applications, for both in-position and out-of-position welding. Up to 80% Argon can be used with no degradation in welding performance or mechanical properties. The arc transfer is small-droplet in nature, with no appreciable spatter deposited. The slag is fluid enough to provide good flow and wetting, but freezes quickly, promoting flat, uniform bead shapes in all positions. Microalloying of the weld metal enhances CVN impact values at lower temperatures.

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

CLASSIFICATIONS & APPROVALS:

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

PRODUCT FEATURES	
Excellent bead appearance in all positions	Designed for Argon/carbon dioxide blends
Easy slag removal	Smooth, spray-like arc transfer
Excellent feedability	Excellent mechanical properties
Fast freezing slag promotes excellent out-of-position results	

WELDING POSITIONS:

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

TYPICAL APPLICATIONS:

Tru-Core FC 71T-AG can be used for welding most carbon steels and certain low alloy steels. It is ideal for welding thicknesses varying from 10 gauge sheet metal to heavy plate sections, where “all position” welding capability, stable arc characteristics and excellent mechanical properties are needed. Some examples are:

- Structural Fabrication
- Shipbuilding
- Railcar Construction
- 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 BLEND:

- 75-80% Argon/Balance CO₂
- Flow Rate: 35-45 CFH

WIRE DIAMETERS (in):

.045	.052	.062
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	AWS/ASME REQ.	75% Ar / 25% CO ₂
TYPICAL WELD METAL COMPOSITION		
CARBON (C)	0.12 (max.)	0.04
MANGANESE (Mn)	1.75 (max.)	1.38
SILICON (Si)	0.90 (max.)	0.43
SULPHUR (S)	0.03 (max.)	0.007
PHOSPHORUS (P)	0.03 (max.)	0.009
CHROMIUM (Cr)	0.20 (max.)	0.06
NICKEL (Ni)	0.50 (max.)	0.02
MOLYBDENUM (Mo)	0.30 (max.)	0.01
VANADIUM (V)	0.08 (max.)	0.016
COPPER (Cu)	0.35 (max.)	0.06
TYPICAL MECHANICAL PROPERTIES		
TENSILE STRENGTH (ksi)	70 – 95	84.2
YIELD STRENGTH (ksi)	58 (min.)	74.1
ELONGATION (% IN 2")	22 (min.)	28
CVN @ -20°F (-29°C)	20 ft-lbf	62.6 ft-lbf
TYPICAL DIFFUSIBLE HYDROGEN – AWS A4.3 REQUIREMENTS		
ml/100g	4.0 (max.)	2.0



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 ₂ or 75-80% Argon/Balance CO ₂
.052	DCEP	150	215	24	26	200	245	5/8	100% CO ₂ or 75-80% Argon/Balance CO ₂
1/16 (.062)	DCEP	165	220	24	26	130	160	3/4	100% CO ₂ or 75-80% Argon/Balance CO ₂

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 ₂ or 75-80% Argon/Balance CO ₂
.052	DCEP	160	315	24	29	225	425	5/8	100% CO ₂ or 75-80% Argon/Balance CO ₂
1/16 (.062)	DCEP	260	360	25	30	250	325	3/4	100% CO ₂ or 75-80% Argon/Balance CO ₂

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.

DISCLAIMER:

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