

TRU-CORE™ FC 71T-12M AWS E71T-1M H8, E71T-9M H8, E71T-12M H8



PRODUCT DESCRIPTION:

FC 71T-12M is a flux cored, gas shielded, all-position electrode, designed specifically for use with gas mixtures from 75% to 80% Argon/balance CO₂. Tru-Core FC 71T-12M 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. 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, E71T-12M H8
- ASME SFA 5.20: E71T-1M H8, E71T-9M H8, E71T-12M 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-12M 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 Steel
- 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 BLENDS:

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

WIRE DIAMETERS (in):

| | | |
|------|------|------|
| .045 | .052 | .062 |
|------|------|------|

| | AWS/ASME REQ. | 75% Ar / 25% CO ₂ |
|---------------------------------------|---------------|---------------------------------|
| TYPICAL WELD METAL COMPOSITION | | |
| CARBON (C) | 0.12 (max.) | 0.05 |
| MANGANESE (Mn) | 1.60 (max.) | 1.35 |
| SILICON (Si) | 0.90 (max.) | 0.32 |
| SULPHUR (S) | 0.03 (max.) | 0.007 |
| PHOSPHORUS (P) | 0.03 (max.) | 0.011 |
| CHROMIUM (Cr) | 0.20 (max.) | 0.05 |
| NICKEL (Ni) | 0.50 (max.) | 0.39 |
| MOLYBDENUM (Mo) | 0.30 (max.) | 0.01 |
| VANADIUM (V) | 0.08 (max.) | 0.019 |
| COPPER (Cu) | 0.35 (max.) | 0.06 |
| TYPICAL MECHANICAL PROPERTIES | | |
| TENSILE STRENGTH (ksi) | 70 – 90 | 83.5 |
| YIELD STRENGTH (ksi) | 58 (min.) | 72.6 |
| ELONGATION (% IN 2") | 22 (min.) | 29 |
| CVN @ -20°F (-29°C) | 20 ft-lbf | 79.6 ft-lbf |

