

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



PRODUCT DESCRIPTION:

Tru-Core FC 71T-12C is a flux cored, gas shielded, all-position electrode, designed specifically for use with 100% CO₂ shielding gas. FC 71T-12C is intended for single and multiple pass applications, for both in-position and out-of-position welding. The metal transfer in the arc is small-droplet in nature, resulting in a smoother arc and lower spatter levels when compared with other E71T-9C, -12C electrodes. The slag characteristics allow for both fast freezing and good coverage of the weld, which produces a flatter, more uniform bead geometry in all position welds. Microalloying of the weld metal provides enhanced CVN impact values.

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

CLASSIFICATIONS & APPROVALS:

- AWS A5.20: E71T-1C H8, E71T-9C H8, E71T-12C H8
- ASME SFA 5.20: E71T-1C H8, E71T-9C H8, E71T-12C H8

| PRODUCT FEATURES | |
|---|---|
| Excellent bead appearance in all positions | Designed for 100% CO ₂ shielding gas |
| 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-12C 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 BLEND:

- 100% CO₂
- Flow Rate: 35-45 CFH

WIRE DIAMETERS (in):

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

| | AWS/ASME REQ. | 100% CO ₂ |
|--|---------------|----------------------|
| TYPICAL WELD METAL COMPOSITION | | |
| CARBON (C) | 0.12 (max.) | 0.04 |
| MANGANESE (Mn) | 1.60 (max.) | 1.36 |
| SILICON (Si) | 0.90 (max.) | 0.36 |
| SULPHUR (S) | 0.03 (max.) | 0.009 |
| PHOSPHORUS (P) | 0.03 (max.) | 0.007 |
| CHROMIUM (Cr) | 0.20 (max.) | 0.04 |
| NICKEL (Ni) | 0.50 (max.) | 0.42 |
| MOLYBDENUM (Mo) | 0.30 (max.) | 0.001 |
| VANADIUM (V) | 0.08 (max.) | 0.02 |
| COPPER (Cu) | 0.35 (max.) | 0.06 |
| TYPICAL MECHANICAL PROPERTIES | | |
| TENSILE STRENGTH (ksi) | 70 – 90 | 84.3 |
| YIELD STRENGTH (ksi) | 58 (min.) | 75.8 |
| ELONGATION (% IN 2") | 22 (min.) | 30 |
| CVN @ -20°F (-29°C) | 20 ft-lbf | 71.3 ft-lbf |
| TYPICAL DIFFUSIBLE HYDROGEN – AWS A4.3 REQUIREMENTS | | |
| ml /100g | 4 (max.) | 3.4 |

