

Flux-Cored Welding Wire



GJ-E71T-9C

CO2 Gas-Shielded Flux-Cored Wire

(Basic-type high-toughness carbon steel)

- ▶ AWS A5.20 E71T-9C
- ▶ EN ISO 17632-A-T46 4 P C1 1

Product description

GJ-E71T-9C is a basic-type flux-cored wire with enhanced low-temperature toughness, strictly complying with AWS A5.20 E71T-9C. Designed for critical applications requiring impact strength at -40°C, it is ideal for welding structures in cold climates, seismic zones, and low-temperature service environments.

Key Advantages

- ▶ Exceptional Low-Temp Toughness: Optimized chemistry and basic slag deliver excellent Charpy impact values at -40°C and below.
- ▶ Low Hydrogen: Ultra-low diffusible hydrogen content ensures maximum resistance to hydrogen-induced cracking.
- ▶ High Integrity Welds: Produces clean, porosity-free weld metal with excellent radiographic quality for critical joints.

Application Guide

- ▶ With 100% CO2: For welding structures in cold climates, seismic zones, and low-temperature storage facilities.
- ▶ For bridge and infrastructure: Suitable for critical structural welds requiring superior toughness and fatigue resistance.
- ▶ For shipbuilding and offshore: Ideal for primary structural members and hull connections demanding high reliability.

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● Main constituents

Elements	C (Carbon)	Mn (Manganese)	Si (Silicon)	S (Sulfur)	P (Phosphorus)
AWS Requirement	≤0.12	≤1.75	≤0.90	≤0.030	≤0.030
Typical Actual Value	0.05	1.35	0.40	0.007	0.009

● Typical Mechanical Properties of Deposited Metal

The mechanical properties of E71T-9C are tested as all-weld metal with 100% CO₂ shielding gas (DC+ polarity).

Test Item	Yield Strength	Tensile Strength	Elongation	Impact Value@ -40°C
AWS A5.20 Requirement	≥400 MPa	480 - 660 MPa	≥22%	≥27 J
Typical Actual Result	465 MPa	565 MPa	25%	115 J

● Reference Welding Parameters

Wire Diameter	1.0 mm (0.040")	1.2 mm (0.045")	1.4 mm (0.055")	1.6 mm (1/16")
Amperage	80 - 180	140 - 300	180 - 340	200 - 400
Voltage	18 - 24	22 - 32	24 - 34	26 - 36