



Quality Management System
in accordance with
ISO 9001
Cert # 05-R0925

PREMIUM 71T-1 Carbon Steel Flux-Cored Wire

U.S. ALLOY CO.
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ALLOY DESCRIPTION AND APPLICATION:

PREMIUM 71T-1 is a baked flux cored wire designed for single or multi pass welding having a smooth arc transfer, low spatter, flat to slightly convex bead contour, with a high deposition rate and easily removal slag. This all-position baked wire has excellent feeding and low fume generation using 100% CO₂ or mixed gas making it a good choice for mild steel and higher strengths steels. The baked process ensures the removal of moisture and may reduce operating temperature along with less wear and drag in the feeding systems. Bridge & offshore structures, ship building, earth moving and all general fabrication requirement with excellent operator appeal.

TYPICAL FCAW WELDING PROCEDURES; DCEP OPTIMUM IN BOLD (FLAT)

Wire Diameter	Wire Speed (ipm)	Amps	Volts	Electrical Stickout	CO ₂ (cfh)
0.045	145- 280 -425	125- 205 -265	22- 29 -33	1/2-1"	35-45
0.052	150- 400 -600	140- 275 -390	19- 28 -35	1/2-1"	40-50
1/16"	150- 330 -490	150- 330 -475	23- 30 -38	1/2-1"	40-50

Approximate Deposition Rates (lbs/hr) .045" = 3.8-9.2 **idea 8.1lbs** ; .052" = 3.8-14.1 **idea 9.2lbs** ; 1/16" = 5.1-17.8 **idea 10.4lbs**

Procedures may vary with change in position, base metals, filler metals, equipment and other changes.

1-2 VOLTS LOWER USED WITH MIXED GAS

TYPICAL WELD METAL CHEMISTRY (%) AND WELD METAL PROPERTIES;

AWS Spec	71T-1	BASED ON 80/20 GAS	AWS Spec	71T-1
Carbon	0.12 max	0.05	Tensile Strength (psi)	70-95,000
Manganese	1.75 max	1.42	Yield Strength (psi)	58,000 min.
Silicon	0.90 max	0.66	Elongation in 2"	22 % min.
Phosphorus	0.030 max.	0.013	Charpy V-notch at -0°F	20 ft·lbs min.
Sulfur	0.030 max.	0.004	Chromium	0.20 max.
Copper	0.35 max.	0.01	Vanadium	0.08 max.
Nickel	0.50 max.	0.01		0.02
Molybdenum	0.30 max.	0.001		0.004

Hydrogen test was 4.36(ml/100g) with 80% Ar + 20% CO₂

AVAILABLE SIZES: TCD 71T-1 = Spools of .045, .052, 1/16"

Other sizes may be available – please inquire

SPECIFICATIONS; AWS A5.20

ASME SFA 5.20

AWS A5.36

ASME SFA 5.36

E71T-1C/1M-H8

E71T-1C/1M-H8

E71T1-C1[M21]A0-CS1-H8

E71T1-C1[M21]A0-CS1-H8

(Formerly classified as E71T-1)



APPROVALS:  CWB {wire size 1.1 – 1.6mm} Standard CSA W48-18 Classification E491T1-C1A2-CS1-H8

OTHER INTERNATIONAL SPECIFICATIONS: KS D1704 YFW-A50DM & JIS Z3313 T4943T15-0MA-H5

E491T1-M21A2-CS1-H8

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