



WASHINGTON ALLOY'S Quality Management System is Certified to ISO 9001:2008 Cert # 05-R0925

Alloy 625 Flux-Cored Wire

U.S. ALLOY CO.
dba Washington Alloy
7010-G Reames Rd.
Charlotte, NC 28216
www.weldingwire.com



American Welding Society
Sustaining Company Member



ALLOY DESCRIPTION AND APPLICATION:

Alloy 625 FC is a nickel-chromium-molybdenum-iron flux cored filler used for nickel base alloys which contains chromium-molybdenum or iron-chromium and themselves to steel. Inconel® 625 & 825, alloy 25-6Mo and overlaying steel as well as joining stainless may be an excellent choice also. This weld metal has good strengths and resists corrosion and oxidation up to 1500°F. Some of these base metals are found with specifications of ASTM B 443, B 444, B 446 (all listed under UNS 06625), B 407, B409, B 512, B564 (all listed under UNS N08800)

TYPICAL FCAW WELDING PROCEDURES; DCEP

Wire Diameter	Wire Speed (ipm)	Amps	Volts	Electrical Stickout	Ar & CO ₂ (cfh)
0.045	275-400	125-240	25-32	1/2-3/4"	30-50
1/16"	180-285	155-320	26-31	1/2-3/4"	30-50

Procedures may vary with change in position, base metals, filler metals, equipment and other changes. Keep heat input and interpass to a minimum

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

	AWS Spec.		AWS Spec
Carbon	0.10 max	Tensile Strength (psi)	100,000 min.
Manganese	0.50 max	Elongation in 2"	25 % min.
Silicon	0.50 max	Molybdenum	8.0-10.0
Nickel	58.0 min.	Nb (Cb) + Ta	3.15-4.15
Phosphorus	0.02 max.	Copper	0.50 max
Sulfur	0.015max	Titanium	0.40 max
Chromium	20.00-23.00	Iron	5.00 max

Cobalt is 0.10% max when specified; Tantalum (Ta) is 0.30% max when specified; Iron is 1.0% max when specified

AVAILABLE SIZES: TNF 625FC= Spools of .045

Other sizes available – please inquire

SPECIFICATIONS; AWS A5.34/A5.34M ENiCrMo3T0-1/4 & TNi 6625-01/4 (flat and horizontal)

AWS A5.34/A5.34M ENiCrMo3T1-1/4 & TNi 6625-11/4 (all position)

1/4 = 1is for 100% CO₂ & 4 is for 75-80% Ar with balance CO₂

EAST COAST
7010-G Reames Rd
Charlotte, NC 28216
Tel (888) 522-8296
Fax (704)598-6673

GULF COAST
4755 Alpine Drive #100A
Stafford, TX 77477
Tel (877) 711-9274
Fax (281)313-6332

WEST COAST
8535 Utica Ave
Rancho Cucamonga, CA 91730
Tel(800)830-9033
Fax (909)291-4586



2012 DC

Warehouse Distribution Center – Dayton, Ohio

Head Office – Puyallup, Washington

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