



**WA. ALLOY CO.**

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

# Alloy 82 Flux-Cored Wire

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

[www.weldingwire.com](http://www.weldingwire.com)



**American Welding Society**

Sustaining Company Member



## ALLOY DESCRIPTION AND APPLICATION:

Alloy 82 FC is a nickel-chromium-iron flux cored filler used for nickel base alloys which has a fluid weld puddle leaving a nice weld bead appearance and very easy slag removal. Alloy 82 is used to weld many combinations of Inconel® 600, 601, 690, and Incoloy® 800, 800HT or nickel base metals to carbon steel, stainless steel, nickel and nickel-coppers. This weld metal has good strengths and resists fissuring and corrosion and oxidation up to 900°F. Some of these base metals are found with specifications of ASTM B 163, B 166, B 167, B 168 (all listed under UNS 06600), 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 <sub>2</sub> (cfh)
0.045	275-400	125-210	25-30	1/2-3/4"	30-50
1/16"	185-285	175-280	26-31	1/2-3/4"	30-50

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

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

	AWS Spec.		AWS Spec
Carbon	0.10 max	Tensile Strength (psi)	80,000 min.
Manganese	2.5-3.5	Elongation in 2"	25 % min.
Silicon	0.50 max		
Nickel	67.0 min.	Nb (Cb) + Ta	2.0-3.0
Phosphorus	0.030 max.	Copper	0.50 max
Sulfur	0.015 max	Titanium	0.75 max
Chromium	18.00-22.00	Iron	3.0 max

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

**AVAILABLE SIZES:** TNF 82FC= Spools of .045 & 1/16"

Other sizes available – please inquire

**SPECIFICATIONS;** AWS A5.34/A5.34M ENiCr3T0-1/4 & TNi 6082-01/4 (flat and horizontal)

AWS A5.34/A5.34M ENiCr3T1-1/4 & TNi 6082-11/4 (all position)

1/4 = 1is for 100% CO<sub>2</sub> & 4 is for 75-80% Ar with balance CO<sub>2</sub>

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