



# NICKEL 55 Welding Electrodes

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;

Washington Alloy Nickel 55 is designed for all-position joining and surfacing of cast iron, malleable iron and ductile iron to itself or dissimilar metals such as mild steels, stainless steel, wrought alloys or high nickel alloys. A core wire chemistry of approximately 55% nickel and 45% iron produces weld deposits with much lower weld shrinkage stress which in turn reduces the possibility of weld or heat-affected zone cracking. Washington Alloy Nickel 55 produces high strength, ductile weld deposits even when welding low grade cast iron containing excessive levels of phosphorus or other contaminants. Washington Alloy Nickel 55 is especially suited for welding heavy sections such as motor blocks, housings, machine parts, frames, defective castings and building-up worn sections. Weld deposits are machinable and the deposit color will approximate that of cast iron.

## TYPICAL WELDING PROCEDURES; AC/DCEP(DC+)

Diameter	Amps (Flat)	Diameter	Amps (Flat)
3/32"	50-80	1/8"	80-120
5/32"	110-140	3/16"	130-170

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

## TYPICAL WELD METAL CHEMISTRY (%) & PROPERTIES (Typical Chemistry & mechanical)

	Typical		Typical
Carbon	0.058	Phosphorus	0.024
Iron	Balance	Sulphur	0.024
Nickel	55.03	Brinell Hardness	190
Manganese	1.27	Tensile Strength (psi)	70,000
Silicon	0.66	Yield Strength (psi)	53,000
Copper	2.45	Elongation in 2" (%)	6-12 %

**AVAILABLE SIZES: TN NI-55** 3/32, 1/8, 5/32, 3/16

Other sizes may be available – please inquire

**SPECIFICATIONS;** AWS A5.15 ENiFe-CI  
ASME SFA 5.15 ENiFe-CI

**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



DC 2012

Warehouse Distribution Center – Dayton, Ohio

Head Office – Puyallup, Washington

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