



# NICKEL 99 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 99 is recommended for all-position welding of thing cast iron sections where maximum machinability is required. Since the core wire is 99% nickel, weld deposits are basicaly "soft" and can be shaped, milled, drilled, or tapped, while the color will match that of cast iron. Washington Alloy Nickel 99 is specifically suited for repairing cracked or porous castings and to weld cast iron to itself or dissimilar metals such as low alloy and carbon steels.

### Applications

The weld deposits produced by Washington Alloy Nickel 99 have lower strength and ductility than those of 55% nickel cast iron electrodes. For this reason Nickel 99 should only be used whre maximum machinability of highly diluted weld metal is required or where weld stresses are not overly severe. Common uses include thin plates, machinery parts, frames and housings.

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

Diameter	Amps (Flat)	Diameter	Amps (Flat)
3/32"	30-70	1/8"	70-110
5/32"	90-130	3/16"	110-160

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	0.055	Phosphorus	0.017
Iron	0.850	Sulphur	0.007
Copper	0.16	Brinell Hardness	170
Manganese	0.33	Tensile Strength (psi)	50,000
Silicon	0.46	Yield Strength (psi)	40,000
Nickel	Balance	Elongation in 2"(%)	3-4 %

**AVAILABLE SIZES: TN NI-99** 3/32, 1/8, 5/32, 3/16

Other sizes may be available – please inquire

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

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