



WA. ALLOY CO.

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

Ni-61 Welding Wire and Rod

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;

Washington Alloy 61 is a high nickel filler metal used for MIG, TIG or plasma arc welding of high nickel base 200 or low carbon nickel 201 to themselves or to each other. Washington Alloy 61 is also used for joining nickel 200 and 201 to dissimilar metals such as carbon steel, stainless steel, Inconel® and Incoloy® alloys, copper-nickel alloys and Monel® alloys. Excellent for overlaying on steel and for welding cast iron. Titanium content in the wire controls weld metal porosity.

TYPICAL GMAW WELDING PROCEDURES; DCEP Spray Arc

Wire Diameter	Wire Speed (ipm)	Amps	Volts	Electrical Stick-out	Argon (cfh)
0.030	550-750	175-250	26-32	3/8-1/2"	30-40
0.035	425-575	175-300	26-32	3/8-1/2"	30-40
0.045	250-350	200-310	26-32	3/8-1/2"	35-50
0.062	125-200	250-330	27-33	1/2"-5/8"	35-50

TYPICAL GMAW WELDING PROCEDURES; DCEP Short Circuit

Wire Diameter	Wire Speed (ipm)	Amps	Volts	Electrical Stick-out	Argon (cfh)
0.035	150-200	90-110	19-21	3/8-1/2"	35-45
0.045	175-225	100-140	22-24	3/8-1/2"	40-50

TYPICAL GTAW WELDING PROCEDURES; DCEN with EWTh-2 truncated conical tip

Filler Wire Size	Tungsten	Amps	Volts	Gas Cup Size	Argon (cfh)	Base thickness
1/16"	1/16"	80-150	12	1/2"	20	1/16-1/8"
3/32"	3/32"	150-250	12	3/4"	25	1/8- 3/16"
1/8"	1/8"	200-375	12	5/8"	30	1/4-1/2"

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

TYPICAL CHEMISTRY (%) & WELD METAL PROPERTIES

all single values are maximum percentages

Nickel	93.0 MIN	Carbon	0.15	Copper	0.25
Manganese	1.0	Phosphorus	0.02	Silicon	0.75
Sulfur	0.015	Iron	1.0	Titanium	2.0- 3.5
		Aluminum	1.50		

Tensile Strength (psi) 66,800 Yield Strength (psi) 37,200 Elongation 28%

AVAILABLE SIZES: TN 61 = Spools of .030, 035, 045, 1/16
Cut lengths of .035, 045, 1/16, 5/64, 3/32, 1/8,

SPECIFICATIONS; ANSI/AWS A5.14 ERNi-1
ASME SFA 5.14 ERNi-1 F No, 41

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