



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

309 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;

309 is a austenitic stainless steel used to weld base metal of similar composition and 300 type stainless to carbon or low alloy steels, also used for welding heat resistant AISI 309 and other straight chromium grades of stainless steel where preheat and postheat treatment is not possible. 309 wire produces sound ductile weld deposits. Other applications would include joining stainless steel to mild or carbon steels, steel overlay work and for welding AISI 304 clad stainless. Used on 304 where more severe corrosion condition exist.

(Tri-mix gas = 90%He+7.5%Ar+2.5%CO₂)

TYPICAL GMAW WELDING PROCEDURES; DCEP Short Circuit

Wire Diameter	Wire Speed (ipm)	Amps	Volts	Electrical Stick-out	Tri-mix (cfh)
0.023	180-400	30-85	14-19	3/8-1/2"	20-25
0.030	150-350	45-125	15-20	3/8-1/2"	20-25
0.035	120-330	60-150	16-22	3/8-1/2"	20-30
0.045	100-280	90-210	17-22	3/8-1/2"	25-30
<i>Spray 0.030</i>	<i>280-600</i>	<i>160-220</i>	<i>24-28</i>	<i>3/8-1/2"</i>	<i>(1)25-35</i>
<i>0.035</i>	<i>250-470</i>	<i>170-295</i>	<i>23-29</i>	<i>1/2-3/4"</i>	<i>(1)25-35</i>
<i>0.045</i>	<i>200-385</i>	<i>195-360</i>	<i>24-30</i>	<i>1/2-3/4"</i>	<i>(1)30-35</i>
<i>1/16"</i>	<i>110-200</i>	<i>210-380</i>	<i>25-31</i>	<i>1/2-3/4"</i>	<i>(1)35-40</i>

⁽¹⁾ 98%Ar
2%O₂

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	3/8"	20	1/16-1/8"
3/32"	3/32"	150-250	12	3/8"	20	1/8- 3/16"
1/8"	1/8"	200-375	12	1/2"	25	1/4-1/2"

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

TYPICAL WIRE CHEMISTRY (%) & WELD METAL PROPERTIES

Carbon	0.06	Tensile Strength (psi)	86,200
Manganese	2.03	Yield Strength (psi)	57,000
Silicon	0.36	Elongation	47 %
Molybdenum	0.08	Chromium	23.48
Nickel	13.74		

AVAILABLE SIZES: TS 309 = Spools of 023, 030, 035, 045, 1/16, 5/64, 1/8
TT 309 = Cut lengths of 030, 035, 045, 1/16, 3/32, 1/8, 5/32
Other sizes available – please inquire

SPECIFICATIONS; ANSI/AWS A5.9 ER309L
ASME SFA 5.9 ER309

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

Washington Alloy Company believes that all information and data given is correct. Use this information to assist in making your own evaluations or decisions and this information should not be mistaken as an expressed or implied warranty. U.S. ALLOY CO. assumes no liability for results or damages incurred from the use of any information contained herein, in whole or in part.