



W.A. ALLOY CO.

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Cert # 05-R0925

410NiMo Welding Wire and Rod

U.S. ALLOY CO.
dba Washington Alloy
825 Groves St
Lowell, NC 28098
www.weldingwire.com



ALLOY DESCRIPTION AND APPLICATION

ER410NiMo is designed for welding ASTM CA6NM castings as well as light gauge 405, 410 and 410S stainless steels. The increased nickel and molybdenum content of ER410NiMo provides for improved corrosion resistance at elevated temperatures. Preheat and postweld heat treatment is recommended. Postweld heat treatment should not exceed 1150°F. (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.

Pre-heat & postheat recommended

TYPICAL WIRE CHEMISTRY (%) & WELD METAL PROPERTIES* * Pre-heat & post heat required

Carbon	0.02	Phosphorus	0.011	<i>Stress relieved 1hr. 1150°F</i>
Manganese	0.43	Tensile Strength (ksi)	117-155	<i>130-136</i>
Silicon	0.38	Yield Strength (psi)	88-130	<i>110-124</i>
Molybdenum	0.44	Elongation	17-21 %	<i>19</i>
Sulfur	0.007			
Chromium	12.12	Charpy V-notch at 0°F		<i>35-40 ft-lbs</i>
Nickel	4.24	HRC	37-41	

AVAILABLE SIZES: TS 410NiMo= Spools of 035, 045, 3/32

TT 410NiMo = Cut lengths of 035, 045, 1/16, 3/32, 1/8, 5/32, 3/16

Other sizes available - please inquire

SPECIFICATIONS; ANSI/AWS A5.9 ER410NiMo
ASME SFA 5.9 ER410NiMo



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