



80S-W Low Alloy Steel Welding Wire and Rod

U.S. ALLOY CO.
dba Washington Alloy
7010-G Reames Rd.
Charlotte, NC 28216
www.weldingwire.com



ALLOY DESCRIPTION AND APPLICATION;

80S-W is a wire designed for single or multi pass using 98%

AR/2%O₂ or Argon /CO₂ shielding gas welding having a smooth spray-type transfer commonly used on weathering steels. This all position wire will provide a good weld deposit color match on such alloy as ASTM A588 & 242 and weathering steels. Weathering steels are normally used in the construction of bridges, highway, shipyards, rail road and many other general industries and buildings.

TYPICAL GMAW WELDING PROCEDURES; DCEP Short Circuit ⁽¹⁾ 98Ar/2%O₂

Wire Diameter	Wire Speed (ipm)	Amps	Volts	Travel speed (ipm)	75/25 or CO ₂ (cfh)
0.035	100-520	60-235	16-25	11-40	20-30
0.045	70-270	90-290	18-23	12-22	25-35
<i>Spray 0.035</i>	<i>320-600</i>	<i>160-300</i>	<i>23-26</i>	<i>11-22</i>	⁽¹⁾ 25-35
<i>0.045</i>	<i>170-550</i>	<i>170-375</i>	<i>23-29</i>	<i>12-21</i>	⁽¹⁾ 25-35
<i>1/16"</i>	<i>175-350</i>	<i>275-475</i>	<i>25-31</i>	<i>9-19</i>	⁽¹⁾ 25-35

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"	100-160	12	3/8"	20	1/16-3/32"
1/16-3/32"	3/32"	120-250	12	3/8"	20	1/8- 3/16"
1/8"	1/8"	150-300	12	1/2"	25	1/4-1/2"

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

WELD METAL CHEMISTRY (%) AND PROPERTIES;

Carbon	0.12 max.	Nickel	0.50-1.80
Manganese	1.30 max	Chromium	1.25 max.
Silicon	0.20-0.80	Vanadium	0.05 max.
Phosphorus	0.025 max.	Tensile Strength (psi)	80,000 min
Sulfur	0.025 max.	Yield Strength (psi)	67,000 min.
Molybdenum	0.35 max.	Elongation in 2"	20% min.
Copper	1.25 max.	Charpy V-notch at -20°F	30 ft-lbs min.

AVAILABLE SIZES: TC 80S-W = Spools of .035, .045



SPECIFICATIONS; WASHINGTON ALLOY INTERNAL

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