

80S-B2 Welding Wire and Rod



ALLOY DESCRIPTION AND APPLICATION;
 80S-B2 is used in welding 1/2 Cr -1/2 Mo, 1Cr - 1/2 Mo, and 1-1/4 Cr -1/2 Mo steels and dissimilar combinations of Cr-Mo steels and carbon steels where elevated temperatures and corrosive services. Preheat and inter-pass recommended and may also need followed by post heat treating.

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

Wire Diameter	Wire Speed (ipm)	Amps	Volts	Travel speed (ipm)	75/25 (cfh)	(Argon & CO ₂)
0.023	80-350	30-85	14-19	10-15	20-25	
0.030	110-340	40-130	15-20	12-24	20-25	
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>	<i>(1)25-35</i>	
<i>0.045</i>	<i>170-550</i>	<i>170-375</i>	<i>23-29</i>	<i>12-21</i>	<i>(1)25-35</i>	
<i>1/16"</i>	<i>175-350</i>	<i>275-475</i>	<i>25-31</i>	<i>9-19</i>	<i>(1)25-35</i>	

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.

AWS CHEMISTRY (%) & WELD METAL REQUIREMENTS;

Carbon	0.07-0.12	Copper	0.35 max
Manganese	0.40-0.70	Other Total	0.50 max
Silicon	0.40-0.70		
Phosphorus	0.025 max	Preheat & Interpass 275°-325° F	
Sulfur	0.025 max	PWHT: 1125°-1175°F	
Chromium	1.20-1.50	Tensile Strength (psi)	80,000 minimum
Nickel	0.20 max	Yield Strength (psi)	68,000 minimum
Molybdenum	0.40-0.65	Elongation in 2" %	19 % minimum

AVAILABLE SIZES: TC = Spools and rods of .030, .035, .045, 1/16,
 TT = Cut lengths of .035, .045, 1/16, 3/32, 1/8, 5/32

SPECIFICATIONS; ANSI/AWS A5.18 ER 80S-B2
 ASME SFA 5.18 ER 80S-B2

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.