

**MIDALLOY ER80S-B8 / EB8 WELDING WIRE**

**CLASSIFICATION**

- AWS 5.28 Class ER80S-B8/ASME SFA 5.28 ER80S-B8
- AWS 5.23 Class EB8/ASME SFA 5.23 Class EB8

**DESCRIPTION**

- Midalloy ER80S-B8 & EB8 is a bare wire used for GMAW, GTAW, and SAW welding.

**APPLICATION**

- Midalloy ER80S-B8 welding wire is used for joining 9Cr-1Mo air hardening steels for elevated temperature creep service, and with corrosion resistance from steam, hot hydrogen gas, and high sulfur crude oils. These include steels such as A335 Grade P9, A336 Grade F9, A217 C12 (Cast), and A199, A200, and A213 grade T9, used primarily in the petrochemical and refinery industries.
- A preheat and interpass temperature of not less than 400°F should be maintained during welding.

**TYPICAL CHEMICAL COMPOSITION**

<b>C</b>	<b>Mn</b>	<b>Si</b>	<b>P</b>	<b>S</b>
.09	.49	.39	.008	.010
<b>Ni</b>	<b>Cr</b>	<b>Mo</b>	<b>Cu</b>	<b>N</b>
.09	8.85	.90	.14	.020

**TYPICAL MECHANICAL PROPERTIES**

<b>TENSILE STRENGTH</b>	<b>YIELD STRENGTH</b>	<b>ELONGATION IN 2"</b>
82,400 PSI	70,040 PSI	20%

**Note:** Mechanical properties listed reflect a PWHT of 745°C for 2 hours.

**RECOMMENDED WELDING PARAMETERS**

PROCESS	DIA. OF WIRE	AMPERAGE	VOLTAGE	GAS/FLUX
<b>GTAW (TIG)</b>	1/16"	50-120	7-13	AR
	3/32"	120-200	10-16	AR
	1/8"	150-220	12-18	AR
<b>GMAW (MIG) SHORT ARC</b>	.035"	90-160	14-20	CO <sub>2</sub>
	.045"	120-200	16-20	CO <sub>2</sub> or 75AR/25 CO <sub>2</sub>
	1/16"	--	--	CO <sub>2</sub> or 75AR/25 CO <sub>2</sub>
<b>GMAW (MIG) SPRAY TRANSFER</b>	.035"	180-230	25-28	98 AR/2 O <sub>2</sub>
	.045"	250-350	25-30	75 AR/25 CO <sub>2</sub>
	1/16"	280-400	26-36	75 AR/25 CO <sub>2</sub>
<b>SUBMERGED ARC</b>	3/32"	250-400	28-32	Marathon 543
	1/8"	400-600	30-34	Marathon 543

**STANDARD PACKAGING**

- **TIG** 50 lb. carton
- **MIG** 33 lb. spool
- **SUB-ARC** 55 lb. coil

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