

MIDALLOY ER80S-B6 / EB6 WELDING WIRE

CLASSIFICATION

- GTAW & GMAW AWS 5.28 Class ER80S-B6/ASME SFA 5.28 ER80S-B6
- SAW AWS 5.23 Class EB6 / ASME SFA 5.23

DESCRIPTION

- Midalloy ER80S-B6 & EB6 welding wire is a copper-coated wire used for GMAW, GTAW, and SAW welding.

APPLICATION

- Midalloy ER80S-B6 welding wire is used for joining 5 Cr and ½ Moly steels such as A336 Gr. F5, A155 Gr. 5 Cr, A335 Grs. P5 and P5b, A217 C5 (cast) and A199/A213 Grs. T5 and T5b. These grades are used for elevated temperature creep service and with corrosion resistance against steam, hot hydrogen gas and high sulfur crude oils. Used primarily in the petro-chemical and refinery industries.
- A preheat and inter-pass temperature of not less than 350°F should be maintained during welding.

TYPICAL CHEMICAL COMPOSITION

C	Mn	Si	P	S	Ni	Mo
0.09	0.51	0.39	0.007	0.005	0.05	0.56
V	Ti	Al	Cu	O	N	Cr
0.01	0.006	0.012	0.13	0.008	0.009	5.1

TYPICAL MECHANICAL PROPERTIES

TENSILE STRENGTH	YIELD STRENGTH	ELONGATION IN 2"
85,650 PSI	73,100 PSI	20%

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

RECOMMENDED WELDING PARAMETERS

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