Alloy: COREWELD 80S-B2 | Class: ER80S-B2

ER80S-B2 • Weld Processes: MIG & TIG

CERTIFIED TO
AWS A5.28
ASME SFA A5.28

AWS CHEMICAL COMPOSITION REQUIREMENTS | DEPOSITED CHEMICAL COMPOSITION % (TYPICAL)

AWS REQUIREMENT (%)		TYPICAL DEPOSIT (%)	
C	0.07 – 0.12	**C**	0.09
Ni	0.20 max	**P**	0.012
Mn	0.40 – 0.70	**Cr**	1.35
Cr	1.20 – 1.50	**Mn**	0.55
Si	0.40 – 0.70	**S**	0.006
Mo	0.40 – 0.65	**Mo**	0.55
P	0.025 max	**Si**	0.48
Cu	0.35 max	**Ni**	0.10
S	0.025 max	**Cu**	0.15
Other	0.50 max		

DEPOSITED MECHANICAL PROPERTIES % (SR – 1150°F ONE HOUR) | CHARPY-V-NOTCH IMPACT PROPERTIES %

MECHANICAL PROPERTY		CHARPY-V-NOTCH IMPACT	
Tensile Strength	85,000 psi	**At +32°F**	60 ft. lbs.
Yield Strength	72,000 psi		
Elongation	22%		

APPLICATION

COREWELD 80S-B2 ER80S-B2 is for gas metal arc welding of 1¼ chromium, ½ molybdenum steels, which are used in high temperature applications. 300°F min. preheat, inter-pass are recommended during the welding operation.

AVAILABLE SIZES & RECOMMENDED WELDING PARAMETERS

PROCESS	DIAMETER OF WIRE	DIAMETER OF WIRE (MM)	VOLTAGE (V)	AMPERAGE (A)	GAS
TIG					
	.035 in	0.90	10–12	50–70	100% Argon
	.045 in	1.20	10–12	70–100	100% Argon
	1/16 in	1.60	12–15	100–125	100% Argon
	3/32 in	2.40	15–20	125–175	100% Argon
	1/8 in	3.20	15–20	175–250	100% Argon
MIG — Spray Transfer					
	.035 in	0.90	28–32	165–200	98% Argon + 2% Helium
	.045 in	1.20	30–34	180–220	75% Argon + 25% CO_2
	1/16 in	1.60	30–34	230–260	100% CO_2
MIG — Short Arc Transfer					
	.035 in	0.90	22–25	100–140	100% CO_2
	.045 in	1.20	23–26	120–150	75% Argon + 25% CO_2

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