



Unibrazed 70S-B2L (ER70S-B2L)

Classification:

AWS A5.28 / ASME SFA5.28 Class ER70S-B2L

Description:

Unibrazed 70S-B2L is identical to Unibrazed 80S-B2 except for the low-carbon content (0.05 percent maximum). It exhibits greater resistance to cracking and is more suitable for welds to be left in the as-welded condition or when the accuracy of the postweld heat treatment operation is questionable. The classification was previously ER80S-B2L but the strength requirements and classification designator have been changed to reflect the true strength capabilities due to the lower carbon content in the chemical composition

Applications:

Unibrazed 70S-B2L is used to weld 1/2Cr-1/2Mo, 1Cr-1/2Mo, and 1-1/4Cr-1/2Mo steels for elevated temperatures and corrosive service. It is also used for joining dissimilar combinations of Cr-Mo and carbon steels. A preheat and interpass temperature of not less than 275°F should be maintained during welding.

Typical Chemical Composition

C	Mn	Si	P	S	Ni	Cr	Mo	Cu	Other
0.05	0.40-0.70	0.40-0.70	0.025	0.025	0.20	1.20-1.50	0.40-0.65	0.35	0.50

Typical Mechanical Properties

Tensile Strength	75,000 PSI
Yield Strength	58,000 PSI
Elongation in 2"	19%

Note: Mechanical properties listed reflect a PWHT of 1150°F.

Recommended Welding Parameters:

<u>Process</u>	<u>Dia. Of Wire</u>	<u>Amperage</u>	<u>Voltage</u>	<u>Gas</u>
GTAW (TIG)	1.16"	50 - 120	7 - 13	Argon
	3/32"	120 - 200	10 - 16	Argon
	1/8"	150 - 200	12 - 18	Argon
GMAW (MIG)	.035	90 - 160	14 - 20	CO ₂
Short Arc	.045	120 - 200	16 - 20	CO ₂ or 75% Argon / 25% CO ₂
GMAW (MIG)	.035	180 - 230	25 - 28	98% Argon / 2% O ₂
	Spray Arc	.045	250 - 350	25 - 30

Standard Sizes

MIG: .035", .045"

TIG: 1/16", 3/32", 1/8", 5/32"

Notice: The results reported are based upon testing of the product under controlled laboratory conditions in accordance with American Welding Society Standards. Actual use of the product may produce different results due to varying conditions. An example of such conditions would be electrode size, plate chemistry, environment, weldment design, fabrication methods, welding procedure and service requirements. Thus the results are not guarantees for use in the field. The manufacturer disclaims any warranty of merchantability or fitness for any particular purpose with respect to its products.