

# Inweld

Alloy ER80S-B2

AWS A5.28

UNS Number: K20900



## Description and Applications:

ER80S-B2 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. All transfer modes of the GMAW process may be used. Careful control of preheat, interpass temperatures, and postheat is essential to avoid cracking. ER80S-B2 is classified after postweld heat treatment. Special care must be used when using it in the as-welded condition due to higher strength levels.

## Chemical Composition of ER80S-B2

C	Mn	Si	P	S	Ni	Cr	Mo	V	Ti	Zr	Al	Cu	other
0.07-0.12	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

Single values are maximum unless otherwise specified.

(As Welded)

Shielding Gas: Argon/1-5% O<sub>2</sub>

Tensile Strength (min) psi: 80,000

MPa: 550

Yield Strength (min) psi: 68,000

MPa: 470

Elongation % (min) 19

