

# Inweld ER502 (ER80S-B6)

Alloy ER502 (ER80S-B6)

AWS A5.9

UNS Number: S50280



## Description and Applications:

The nominal composition (wt.%) of this classification is 5 Cr and 0.50 Mo. It is used for welding material of similar composition, usually in the form of pipe or tubing. The alloy is an air-hardening material, and therefore, when welding with this filler metal, pre-heating and postweld heat treatment is required.

NOTE: Mechanical properties listed below reflect utilization of a postweld heat treatment between 1550°F and 1600°F for two hours.

## Chemical Composition of ER502 (ER80S-B6)

C	Cr	Ni	Mo	Mn	Si	P	S	Cu
0.10	4.6-6.0	0.6	0.45-0.65	0.6	0.5	0.03	0.03	0.75

Single values are maximum unless otherwise specified.

(As Welded)

Shielding Gas: 98/99% Argon + 2/1% Oxygen  
97% Argon + 3% CO<sub>2</sub>

Tensile Strength (min) psi: 78,500 PSI

MPa: 540 MPA

Yield Strength (min) psi: 60,500 PSI

MPa: 420 MPA

Elongation % (min) 32%

