

Chrome Moly Welding Wire

Alloy: WW80S-B8
Class: ER80S-B8

Conforms to Certification: AWS A5.28
ASME SFA A5.28

Alloy: ER80S-B8
Weld Process: Mig and Tig Welding Processes

AWS Chemical Composition Requirements

C = 0.10 max	Ni = 0.50 max
Mn = 0.40 - 0.70	Cr = 8.00 – 10.50
Si = 0.50 max	Mo = 0.80 – 1.20
P = 0.025 max	Cu = 0.35 max
S = 0.025 max	Other = 0.50 max

Deposited All Weld Metal Properties % (AW)

Tensile Strength	84,000psi
Yield Strength	69,000psi
Elongation	18%

Deposited Charpy-V-Notch Impact Properties %

Not Applicable

Deposited Chemical Composition % (Typical)

C = 0.08	P = 0.015	Cr = 9.50
Mn = 0.55	S = 0.006	Mo = 1.00
Si = 0.004	Ni = 0.40	Cu = 0.18

Deposited Mechanical Properties (S.R.)

1575° F for (2) Hours

Tensile Strength	79,000psi
Yield Strength	63,500psi
Elongation	29%

Application

This classification contains 8% – 10.5% chromium and about 1% molybdenum. Material is used to weld base material of similar composition, for high temperature service applications. 350° F min preheat, inter-pass are recommended.

Recommended Welding Parameters

<u>Process</u>	<u>Diameter of Wire</u>	<u>Voltage (V)</u>	<u>Amperage (A)</u>	<u>Gas</u>
Tig	.035 inches x 36	10 – 12	50 – 70	100% Argon
	.045 inches x 36	10 – 12	70 – 100	100% Argon
	1/16 inches x 36	12 – 15	100 - 125	100% Argon
	3/32 inches x 36	15 – 20	125 - 175	100% Argon
	1/8 inches x 36	15 – 20	175 - 250	100% Argon
MIG-Sprayer Transfer	.035 inches	28 – 32	165 – 200	98% Argon + 2% Helium
	.045 inches	30 – 34	180 – 220	75% Argon + 25% Co ₂
	1/16 inches	30 – 34	230 – 260	100% Co ₂
MIG-Short Arc Transfer	.035 inches	22 – 25	100 – 140	100% Co ₂
	.045 inches	23 – 26	120 – 150	75% Argon + 25% Co ₂

