



PRODUCT

DATA SHEET

Chrome Moly Welding Wire

Weld Process: Mig (GMAW) & Tig (GTAW)

Alloy: 80S-B2 Class: ER80S-B2

Conforms to Certification: AWS A5.28 / ASME SFA 5.28

Alloy: DM80SB-2

AWS Chemical Composition Requirements

C = 0.07 - 0.12 Ni = 0.20 max
Mn = 0.40 - 0.70 Cr = 1.20 - 1.50
Si = 0.40 - 0.70 Mo = 0.40 - 0.65
P = 0.025 max Cu = 0.35 max
S = 0.025 max Other = 0.50 max

Deposited Mechanical Properties % (SR) (1150°F one hour)

Tensile Strength	85,000psi
Yield Strength	72,000psi
Elongation	22%

Deposited Chemical Composition % (Typical)

C = 0.09	P = 0.012	Cr = 1.35
Mn = 0.55	S = 0.006	Mo = 0.55
Si = 0.48	Ni = 0.10	Cu = 0.15

Deposited Charpy-V-Notch Impact Properties %

At +32°F 60 ft. lbs.



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Application

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	Voltage (V)	Amperage (A)	Gas
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