



PRODUCT

DATA SHEET

Chrome Moly Welding Wire

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

Alloy: 90S-B9 Class: ER90S-B9

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

Alloy: DM90S-B9

AWS Chemical Composition Requirements

C = 0.07 - 0.13 Ni = 0.80 max
 Mn = 1.20 max Cr = 8.00 - 10.50
 Si = 0.15 - 0.50 Mo = 0.85 - 1.20
 P = 0.010 max Cu = 0.20 max
 S = 0.010 max V = 0.15 - 0.30
 Al = 0.04 max N = 0.03 - 0.07
 Nb = 0.02 - 0.10 Other = 0.50 max
Note: the sum of Mn + Ni shall be $\leq 1.50\%$ max

Deposited Chemical Composition % (Typical)

C = 0.09 P = 0.009 Cr = 8.75
 Mn = 0.85 S = 0.009 Mo = 1.08
 Si = 0.20 Ni = 0.55 Cu = 0.11
 V = 0.19 Nb = 0.08 N = 0.04

Deposited All Weld Metal Properties % (AW)

Tensile Strength 100,000psi
 Yield Strength 85,000psi
 Elongation 22%

Deposited Charpy-V-Notch Impact Properties %

Not Applicable

Deposited Mechanical Properties (S.R.)

1400° F for (2) Hours

Tensile Strength 112,000psi
 Yield Strength 100,000psi
 Elongation 17%

Application

Material contains 9% chromium and 1% molybdenum. Classification is intended for welding base materials of similar composition. Requires controlled preheat, inter-pass and post-weld heat treatment.

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



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	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