

CHROME MOLY WELDING WIRE DM90S-B9

Classification: ER90S-B9 AWS A5.28 / ASME SFA 5.28

Weld Process: Mig (GMAW) & Tig (GTAW) Alloy: 90S-B9 Class: ER90S-B9 Alloy: DM90S-B9

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.

AWS Chemical Composition Requirements

C	Mn	Si	P	S	Ni	Cr	Mo	Cu	V	Al	N	Nb	Other
0.07 - 0.13	1.20 max	0.15 - 0.50	0.010 max	0.010 max	0.80 max	8.00 - 10.50	0.85 - 1.20	0.20 max	0.15 - 0.30	0.04 max	0.03 - 0.07	0.02 - 0.10	0.50 max

Note: the sum of Mn + Ni shall be ≤ 1.50% max

Deposited Chemical Composition % (Typical)

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

Deposited All Weld Metal Properties % (AW)

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

Deposited Charpy-V-Notch Impact Properties %

Not Applicable

Deposited Mechanical Properties (S.R.) 1400° F for (2) Hours

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

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% Co2
	1/16 inches	30 - 34	230 - 260	100% Co2
MIG-Short Arc Transfer	.035 inches	22 - 25	100 - 140	100% Co2
	.045 inches	23 - 26	120 - 150	75% Argon + 25% Co2