



PRODUCT

DATA SHEET

Steel and Low Alloy Welding Wire

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

Alloy: 80S-D2 Class: ER80S-D2

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

Alloy: DM80SD-2

AWS Chemical Composition Requirements

C = 0.07 – 0.12 Ni = 0.15 max
Mn = 1.60 – 2.10 Mo = 0.40 – 0.60
Si = 0.50 – 0.80 Cu = 0.50 max
P = 0.025 max Other = 0.50 max
S = 0.025 max

Deposited Chemical Composition % (Typical)

C = 0.09 P = 0.012 Si = 0.58
Mn = 1.65 S = 0.006 Cu = 0.15
Mo = 0.55

Deposited All Weld Metal Properties %

As-Welded

Tensile Strength 85,000psi
Yield Strength 71,500psi
Elongation 21%

Deposited Charpy-V-Notch Impact Properties %

60 ft. lbs. (at +32°F)

Recommended Weld Parameters

SHORT ARC

<u>Diameter</u>	<u>Volts</u>	<u>Amps</u>	<u>IPM</u>
.030	16 – 18	75 – 125	176 – 324
.035	15 – 18	100 – 160	132 – 228
.045	17 – 18	160 – 120	149 – 208

SPRAY ARC

<u>Diameter</u>	<u>Volts</u>	<u>Amps</u>	<u>IPM</u>
.030	26 – 28	200	560
.035	27 – 29	250	504
.045	28 – 31	265	336
.052	29 – 31	300 – 340	280 – 350
1/16	30 – 36	350 – 400	220 – 280

Application

Type ER80S-D2 filler metal contains a high level of deoxidizers (manganese & silicon) to control porosity when welding with CO₂ as the shielding gas, and molybdenum for increased strength.