

## CARBON STEEL WELDING WIRE DM70S-3

**Classification:**

**ER70S-3**

**AWS A5.18 / ASME SFA A5.18**

### Description, Characteristics & Applications:

DuraMax DM70S-3 is a deoxidized bare wire for GMAW and GTAW welding. DuraMax ER70S-3 is used for welding on all grades of carbon steel. It is generally used in root pass and to support welding when back pass is impossible. It provides sufficient deoxidation to allow welding over light mill scale. DM70S-3 has excellent mechanical and toughness properties in low temperature conditions. Typical applications include general and ornamental iron fabrication, metal furniture, farm equipment, and auto frames.

### Typical Chemical Composition (%)

C	Mn	Si	P	S	Ni	Cr	Mo	V	Cu	Ti	Zr
0.06 to 0.15	0.90-1.40	0.45-0.75	0.025 max	0.035 max	0.15 max	0.15 max	0.15 max	0.03 max	0.50 max	0.05-0.15	0.02-0.12

### Typical Mechanical Properties as Welded

Tensile Strength MPa	Yield Strength MPa	Elongation (%)	Charpy V-Notch Impact
480 min	400 min	22 min	Minus -30 C: >= 27 (J)

### Sizes Available and Recommended Welding Parameters

Process	Diameter	Amperage	Voltage	Gas/Flux
GTAW	.035	50 - 70	10 - 12	100% Argon
	.045	70 - 100	10 - 12	100% Argon
	1/16	100 - 125	12 - 15	100% Argon
	3/32	125 - 175	15 - 20	100% Argon
	1/8	175 - 250	15 - 20	100% Argon
	5/32	175 - 250	15 - 20	100% Argon
GMAW Short Arc	.035	90 - 160	14 - 20	100% CO <sub>2</sub> or 75% Ar + 25% CO <sub>2</sub>
	.045	120 - 180	16 - 22	80% Ar + 20% CO <sub>2</sub>
	1/16	160 - 200	16 - 22	80% Ar + 20% CO <sub>2</sub>
GMAW Spray Transfer	.035	165 - 200	25 - 28	98% Ar + 2% O <sub>2</sub>
	.045	180 - 220	25 - 30	75% Ar + 25% CO <sub>2</sub>
	1/16	230 - 260	26 - 36	75% Ar + 25% CO <sub>2</sub>

**Notes** Weld parameters are dependent upon the actual weld process being utilized.

The above information is to be used as a guideline and is based on the source Product Data Sheet. If additional information is needed please contact (800) 692-5930.