

## MIDALLOY ER70S-3 WELDING WIRE

### CLASSIFICATION

- AWS 5.18 Class ER70S-3 / ASME SFA 5.18 Class ER70S-3 (UNS K11022) and EN10204

### DESCRIPTION

- MIDALLOY ER70S-3 welding wire is a copper-coated wire, used for GMAW and GTAW welding. AMSE Section IX F 6 A 1

### APPLICATION

- MIDALLOY ER70S-3 welding wire is designed for the GMAW and GTAW welding most carbon steel materials.
- Normal applications include structural steel, carbon steel plate, pipe, fittings, castings, and forgings.
- The as-welded filler metal deposit exhibits adequate strength and hardness and may not require PWHT.
- MIDALLOY ER70S-3 is capable of obtaining higher charpy impact results with GMAW than ER70S-2.
- MIDALLOY ER70S-3 provides the industry for a quality filler that is capable of making x-ray clear welds.

### TYPICAL CHEMISTRY

C	Mn	Si	Cr	Mo	V	P	S	Cu
0.08	1.05	0.48	0.05	0.05	0.01	0.012	0.006	015

### TYPICAL MECHANICAL PROPERTIES

	AR-2% O <sub>2</sub> *	100% CO <sub>2</sub> *
TENSILE STRENGTH	75,000 PSI	70,000 PSI MIN
YIELD STRENGTH	65,500 PSI	60,000 PSI MIN
ELONGATION	28%	27%
IMPACT CVN@-20°F ***	70 FT-LBS	50 FT-LBS

All welding done with GMAW, GTAW (TIG) will give higher mechanical properties

\*As welded with a preheat of 100°F and inter-pass of 750°F

### RECOMMENDED WELDING PARAMETERS

PROCESS	DIA. OF WIRE	AMPERAGE	VOLTAGE	GAS/FLUX
GTAW (TIG)	1/16"	50-120	7-13	Ar
	3/32"	120-200	10-16	Ar
	1/8"	150-220	12-18	Ar
GMAW (MIG) SHORT ARC	.035"	90-160	14-20	CO <sub>2</sub>
	.045"	120-200	16-20	CO <sub>2</sub> or 75 Ar / 25 CO <sub>2</sub>
	1/16"	-	-	CO <sub>2</sub> or 75 Ar / 25 CO <sub>2</sub>
GMAW (MIG) SPRAY TRANSFER	.035"	180-230	25-28	98 Ar / 2 O <sub>2</sub>
	.045"	250-350	25-30	75 Ar / 25 CO <sub>2</sub>
	1/16"	280-400	26-36	75 Ar / 25 CO <sub>2</sub>

### STANDARD PACKAGE

- TIG 50 lb. carton
- MIG 33 lb. spool

6/4/10

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