

## MIDALLOY ER70S-6 WELDING WIRE

### CLASSIFICATION

- AWS 5.18 Class ER70S-6 / ASME SFA 5.18 Class ER70S-6 (UNS K11140) and EN10204

### DESCRIPTION

- MIDALLOY ER70S-6 welding wire is a bare wire, used for GMAW and GTAW welding
- AMSE Section IX F Number 6 A Number 1

### BENEFITS

- Consistent welding performance
- Excellent arc ignition
- Extremely low overall spatter
- Trouble-free feedability, even at high wire feed speeds and lengthy feed distances
- Stable arc with low feeding force
- High current applicability
- Low fume emission

### APPLICATION

- MIDALLOY ER70S-6 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-6 is intended for single or multi-pass welding with smooth GMAW weld beads.

### TYPICAL CHEMISTRY

C	Mn	Si	Cr	Mo	V	P	S	Cu
0.08	1.45	0.98	0.05	0.05	0.01	0.012	0.010	0.04

TYPICAL MECHANICAL PROPERTIES	AR-2%O2 *	Ar-2%O2 PWHT **	100% CO2
TENSILE STRENGTH	85,000 PSI	75,000 PSI	70,000 PSI MIN
YIELD STRENGTH	75,500 PSI	60,000 PSI	60,000 PSI MIN
ELONGATION	22%	30%	27%
IMPACT CVN@-20°F ***	30 FT-LBS	40 FT-LB	50 FT-LBS

All welding done with GMAW : GTAW(TIG) will give higher mechanical properties(i.e. at -50°F 85 ft-lbs)

\*\* Post weld heat treated at 1,150°F for 8 hours

### 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 / 2-5% CO <sub>2</sub> or 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 10 lb. tube / 60 lb. carton
- MIG 33 lb. spool

*The contents of this publication are presented for informational purposes only, and while every effort has been made to ensure their accuracy, they are not to be construed as warranties or guarantees, express or implied, regarding the products or services described herein or their use or applicability. We reserve the right to modify or improve the designs or specifications of such products at any time without notice.*

Office and Corporate Warehouse  
 630 Axminister Drive  
 St. Louis, MO 63026 • 636-349-6000 • 800-776-3300  
 Fax 636-349-2240

