

MIDALLOY ER70S-2 WELDING WIRE

CLASSIFICATION

- AWS 5.18 Class ER70S-2 / ASME SFA 5.18 Class ER70S-2 (UNS K10726) and EN10204

DESCRIPTION

- MIDALLOY ER70S-2 welding wire is a triple de-oxidized bare wire used for GMAW and GTAW welding.
- AMSE Section IX F 6 A 1

APPLICATION

- MIDALLOY ER70S-2 welding wire is designed for welding most carbon steel materials.
- Normal applications include structural steel, carbon steel plate, pipe, fittings, castings, and forgings.
- Because of the de-oxidizers (Ti, Zr, Al) ER70S-2 can be used on mild steels that are rusty or dirty.
- MIDALLOY ER70S-2 is the welder's choice for GTAW root welding of ASTM/ASME SA-106 Grade B and C.
- The as-welded filler metal deposit exhibits adequate strength and hardness and may not require PWHT.
- MIDALLOY ER70S-2 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	Ti	Zr	Al
0.05	1.15	0.55	0.04	0.005	0.008	0.012	0.006	0.010	0.10	0.07	0.10

TYPICAL MECHANICAL PROPERTIES AS WELDED* PWHT 1150 °F**

TENSILE STRENGTH	85,000 PSI	78,000 PSI MIN
YIELD STRENGTH	65,500 PSI	60,000 PSI MIN
ELONGATION	28%	32%
IMPACT CVN@-20°F ***	85 FT-LBS	100 FT-LBS

All welding done with GTAW (TIG) with Argon Shielding Gas

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

**Post weld heat treatment between 1150°F for one hour.

*** GMAW (MIG) welds normally have much lower impact values (20 to 30 ft-lbs at 0°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 ₂
	.045"	120-200	16-20	CO ₂ or 75 Ar / 25 CO ₂
	1/16"	-	-	CO ₂ or 75 Ar / 25 CO ₂
GMAW (MIG) SPRAY TRANSFER	.035"	180-230	25-28	98 Ar / 2 O ₂
	.045"	250-350	25-30	75 Ar / 25 CO ₂
	1/16"	280-400	26-36	75 Ar / 25 CO ₂

STANDARD PACKAGE

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

11/13/13

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

