

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 copper-coated 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	1.05	0.48	1.35	0.05	0.01	0.012	0.006	015	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

6/4/10

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