

MIDALLOY ER347 BARE WIRE

CLASSIFICATION

- AWS 5.9 Class ER347 / ASME SFA 5.9 Class ER347
- UNS# S34780 A#8 F#6

DESCRIPTION

- MIDALLOY ER347 bare welding wire is a stabilized austenitic stainless steel.

APPLICATIONS

- Typical applications include welding, repairing and overlaying of stabilized grades of stainless steel like type 347 and type 321.
- ER347 is used in the refinery industry to combat high temperature erosion corrosion and fatigue.
- Other welding applications include valves, valve seating surfaces , gears, propeller shafts, and impellers.
- Normally ER347 is normally used to weld AISI 321 since titanium will not transfer across the arc.

TYPICAL CHEMISTRY

C	Mn	Si	Cr	Ni	Mo	Cu	Cb*	S	P	Fe
.06	.144	.33	21.0	10.50	0.1	0.3	0.63	.021	.015	BAL.

*Cb is 10 times the carbon content to a maximum of 1.0%

TYPICAL MECHANICAL PROPERTIES*

TENSILE STRENGTH	78,000 PSI
YIELD STRENGTH	60,000 PSI
ELONGATION IN 2"	30%

WELDING PARAMETERS See Page 2

STANDARD PACKAGING

- TIG 10 Lb. Tube / 60 Lb. Carton
- MIG 30 Lb. Spool
- SAW 60 Lb. Coil

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TYPICAL WELDING PARAMETERS FOR MIDALLOY ER347 STAINLESS WIRE (PAGE2)

Application: Welding type 347 and type 321 stainless

GMAW (SHORT CIRCUITING MODE)

WIRE DIA.	AMPERAGE	VOLTAGE	WIRE SPEED, IN./MIN.	JOINT THICKNESS IN.	GAS
.030"	70-90	17-20	150-200	.050-3/16	90He/7.5Ar/2.5CO2
.035"	70-95	18-24	150-200	.050-3/16	69Ar/30He/1CO2
.035"	85-120	18-22	160-230	.050-3/26	98Ar/2CO2 or 95Ar/5CO2
.045"	135-160	19-22	175-225	1/8-3/4	98Ar/2CO2
	75-160	19-22	175-225	1/8-3/4	90He/7.5Ar/2.5CO2
	75-160	18-22	175-225	1/8-3/4	69Ar/30He/1CO2

GMAW (SPRAY TRANSFER MODE)

.035"	145-200	25-29	225-350	1/16" to 1/4"	92Ar/8CO2 or O2
.045"	190-250	24-30	200-350	1/4" and up	98Ar/2CO2 or O2
.062"	220-300	26-32	210-330	3/8 and up	98Ar/2%O2

GMAW (PULSED CURRENT MODE)

.035" peak	120-150 250-300	18-20	175-225	1/8-3/4	75Ar/25He, Ar or 69Ar/30He/1CO2
.045" peak	120-150 250-300	18-20	175-225	1/8-3/4	75Ar/25He, Ar or 69Ar/30He/1CO2

GTAW (TIG) MANUAL OR AUTOMATIC WITH MIDALLOY ER347

JOINT THICKNESS IN.	TUNGSTEN ELECTRODE DIA. IN.	FILLER WIRE DIA. IN.	AMPERAGE	VOLTAGE	GAS *
.030 to 1/16	1/16	1/16	35-90	10-14	100Ar
1/16 to 1/8	1/16 to 3/32	1/16 or 3/32	90-150	12-16	100Ar
1/8 to 1/4	3/32 or 1/8	3/32 or 1/8	150-150	10-18	100Ar
1/4 and up	3/32 or 1/8	3/32 or 1/8	95-180	10-18	100Ar

*NOTE: FOR DEEPER PENETRATION, FASTER TRAVEL SPEEDS, IMPROVED WELD BEAD APPEARANCE, AND LESS OXIDE DISCOLORATION; USE HELIUM, ARGON HELIUM, OR ARGON WITH A FEW PERCENT HYDROGEN.

SAW (SUBMERGED ARC) Midalloy ER347

WIRE DIA.	AMPERAGE	VOLTAGE	FLUX
3/32"	275-350	28-30	RECORD IN or IND24
1/8"	350-450	29-32	RECORD IN or IND24
1/16"	250-325	28-32	RECORD IN or IND24