

## MIDALLOY ER309 BARE WIRE

### CLASSIFICATION

- AWS 5.9 Class ER309 / ASME SFA 5.9 Class ER309
- UNS# S30980 A#8 F#6

### DESCRIPTION

- MIDALLOY ER309 stainless steel wire is used for GMAW, GTAW, and SAW welding.

### APPLICATION

- MIDALLOY ER309 is most often used to join similar alloys such as 24Cr and 13Ni, in wrought iron form.
- MIDALLOY ER309 is sometimes used to weld type 304 and similar base metals where severe corrosion exists requiring higher alloy weld metal.
- This alloy can also be used to weld type 304 to carbon steel, welding the clad side of type 304 clad steels, and applying stainless steel linings to carbon steel shells.

### TYPICAL CHEMISTRY

C	Cr	Ni	Mo	Mn	Si	P	S	N	Cu
0.08	24.0	13.0	0.07	1.75	0.50	0.02	0.01	0.06	0.11

### TYPICAL MECHANICAL PROPERTIES

TENSILE STRENGTH	86,500 PSI
YIELD STRENGTH	60,000 PSI
ELONGATION MIN.	34%

### RECOMMENDED WELDING PARAMETERS

PROCESS	DIAMETER	VOLTAGE	AMPERAGE	GAS/FLUX*
TIG (GTAW)	1/16"	14-18	90-130	100% Ar
	3/32"	15-20	120-175	100% Ar
	1/8"	15-20	150-220	100% Ar
MIG (GMAW)	.035" SHORT ARC	16-26	70-160	69%Ar-30%He-1%O <sub>2</sub>
	.035" SPRAY ARC	26-31	150-230	92%Ar-8%Co <sub>2</sub> or
	.045" SPRAY ARC	28-32	180-280	98%Ar-2%O <sub>2</sub>
SUB ARC (SAW)	3/32"	28-30	275-350	Record IN or
	1/8"	29-32	350-450	Record IND 24

### STANDARD PACKAGING

- TIG 10 lb. tube / 60 lb. carton
- MIG 30 lb. spool, 2 lb spool, 10 lb spool
- SAW 60 lb. coil

10/16/09

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