

MIDALLOY ER309L BARE WIRE

CLASSIFICATION

- AWS 5.9 Class ER309L / ASME SFA 5.9 Class ER309L
- UNS# S30983 A#8 F#6

FERRITE CONTENT

- 5 – 15 FN

DESCRIPTION

- MIDALLOY ER309L stainless steel wire is used for GMAW, GTAW, and SAW welding.

APPLICATION

- MIDALLOY ER309L is most often used to weld similar alloys in the cast or wrought form.
- This filler metal can also be used in welding dissimilar alloys like mild steel and the stainless steels, and also for direct overlay on mild steel for corrosion applications. Normal applications are for service conditions under 600°F.
- MIDALLOY ER309L is an austenitic stainless steel exhibiting high strength and good toughness over a wide range of temperatures.
- In the as-welded condition made by using this filler metal reduces have less of a risk for carbide precipitation.

TYPICAL CHEMISTRY

C	Cr	Ni	Mo	Mn	Si	P	S	N	Cu
0.025	24.5	13.0	0.35	1.88	0.40	0.02	0.01	0.10	0.35

TYPICAL MECHANICAL PROPERTIES

TENSILE STRENGTH	85,200 PSI
YIELD STRENGTH	59,500 PSI
ELONGATION MIN.	36%
IMPACT AT ROOM TEMPERATURE	100 FT-LB

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 ₂
	.035" SPRAY ARC	26-31	150-230	92%Ar-8%Co ₂ or
	.045" SPRAY ARC	28-32	180-280	98%Ar-2%O ₂
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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