

GEN 309L Welding Wire and Rod

GEN 309L is used to weld base metals of similar chemical composition in wrought or cast form. It is also suitable for joining dissimilar metals such as 18Cr-8Ni stainless steel to mild steel. The low carbon content minimizes the possibility of carbide precipitation.

CONFORMANCES

AWS A5.9/A5.9M	:	ER 309L
ASME SFA-A5.9	:	ER 309L
UNS	:	S30983

AWS CHEMICAL COMPOSITION (TYPICAL)

%C	%Cr	%Ni	%Mo	%Mn
0.03 max 0.015	23.0 – 25.0 23.4	12.0 – 14.0 13.6	0.75 max 0.08	1.0 – 2.5 1.65
%Si	%P	%S	%Cu	
0.30 – 0.65 0.04	0.03 max 0.02	0.03 max 0.01	0.75 max 0.06	

TYPICAL WELD METAL MECHANICAL PROPERTIES

Tensile Strength	:	87,000 psi	600 MPa
Yield Strength	:	59,000 psi	406 MPa
Elongation	:	35 %	

TYPICAL WELDING PARAMETERS

Process	Diameter		Voltage	Amperage	Gas/Flux
TIG (GTAW)	1/16"	1.6 mm	14 – 18	90 – 130	100% Ar
	3/32"	2.4 mm	15 – 20	120 – 175	100% Ar
	1/8"	3.2 mm	16 – 20	150 – 220	100% Ar
MIG (GMAW)	.035"	0.9 mm	29 - 33	160 – 180	98%Ar – 2%O ₂
	.045"	1.1 mm	29 – 33	180 – 220	
	.063"	1.6 mm	29 – 33	210 – 250	
Sub Arc (SAW)	.093"	2.4 mm	29 – 32	300 – 350	
	.125"	3.2 mm	29 – 32	400 – 550	
	.156"	4.0 mm	29 – 32	500 - 650	

*All parameters are suggested as basic guidelines only and will vary depending on joint design, number of passes and other factors.

IMPORTANT: SPECIAL VENTILATION AND/OR EXHAUST REQUIRED BEFORE USE, READ AND UNDERSTAND THE SAFETY DATA SHEET (SDS) FOR THIS PRODUCT AND SPECIFIC INFORMATION PRINTED ON THE PRODUCT CONTAINER.
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