

GEN 307 Welding Wire and Rod

GEN 307 is similar to ER307 with an increased manganese content, reducing the risk of fissuring/hot cracking that can otherwise be a problem in fully austenitic weld metals. It is used primarily for moderate-strength welds with good crack resistance between dissimilar steels such as austenitic manganese steel and carbon steel forgings and castings. It may also be used as a buffer layer under hard facing alloys.

CONFORMANCES

AWS A5.9/A5.9M : 18 8 Mn
ASME SFA-A5.9 : 18 8 Mn

AWS CHEMICAL COMPOSITION (TYPICAL)

%C	%Cr	%Ni	%Mo	%Mn
0.20 max	17.0 – 20.0	7.0 – 10.0	0.5 max	5.0 – 8.0

%Si	%P	%S	%Cu
1.2 max	0.03 max	0.03 max.	0.50 max

TYPICAL WELD METAL MECHANICAL PROPERTIES

Tensile Strength : 94,000 psi 650 MPa
Yield Strength : 67,000 psi 460 MPa
Elongation : 40 %

TYPICAL WELDING PARAMETERS

Process	Diameter		Voltage	Amperage	Gas/Flux
TIG (GTAW)	1/16"	1.6 mm	14 – 18	90 – 140	100% Ar
	3/32"	2.4 mm	15 – 20	120 – 180	100% Ar
	1/8"	3.2 mm	16 – 20	150 – 220	100% Ar
MIG (GMAW)	.035"	0.9 mm	26 – 31	150 – 230	98%Ar – 2%O ₂
	.045"	1.1 mm	28 – 33	180 – 280	98%Ar – 2%O ₂
Sub Arc (SAW)	.093"	2.4 mm	28 – 31	280 – 350	
	.125"	3.2 mm	29 – 33	340 – 450	

*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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