

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.
--

The contents of this document are presented for informational purposes only and while every effort has been made to ensure their accuracy, they are not to be construed as guarantees, express or implied, regarding the products or services described herein or their use or applicability. The user must fully evaluate every process and application in all aspects.