

GEN 312 Welding Wire and Rod

GEN 312 is used to weld cast alloys of similar chemical composition. It is also used to weld dissimilar metals and weld overlays. Its weld deposit contains significant percentage of ferrite in an austenite matrix and thereby highly resistance to weld metal cracks and fissures.

CONFORMANCES

AWS A5.9/A5.9M	:	ER 312
ASME SFA-A5.9	:	ER 312
UNS	:	S31380

AWS CHEMICAL COMPOSITION (TYPICAL)

%C	%Cr	%Ni	%Mo	%Mn
0.15 max 0.10	28.0 – 32.0 30.2	8.0 – 10.5 8.9	0.75 max 0.17	1.0 – 2.5 1.8
%Si	%P	%S	%Cu	
0.30 – 0.65 1.80	0.03 max 0.02	0.03 max 0.01	0.75 max 0.15	

TYPICAL WELD METAL MECHANICAL PROPERTIES

Tensile Strength	:	105,000 psi	724 MPa
Yield Strength	:	75,000 psi	517 MPa
Elongation	:	25 %	

TYPICAL WELDING PARAMETERS

Process	Diameter		Voltage	Amperage	Gas/Flux
TIG (GTAW)	1/16"	1.6 mm	14 – 17	90 – 130	100% Ar
	3/32"	2.4 mm	15 – 20	125 – 200	100% Ar
	1/8"	3.2 mm	16 – 20	200 – 350	100% Ar
MIG (GMAW)	.035"	0.9 mm	28 – 32	160 – 190	98%Ar – 2%O ₂
	.045"	1.1 mm	29 – 33	180 – 220	98%Ar – 2%O ₂
Sub Arc (SAW)	.093"	2.4 mm	28 – 32	250 – 450	
	.125"	3.2 mm	29 – 33	300 – 500	

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

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

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