

GEN 718 Welding Wire and Rod

GEN 718 is used for welding nickel-chromium-niobium-molybdenum alloy (ASTM B637 and AMS 5589) to itself. The weld metal will age harden on heat treatment; its mechanical properties depend on the post weld heat treatment.

CONFORMANCES

AWS A5.14	:	ERNiFeCr-2
ASME SFA-5.14	:	ERNiFeCr-2
UNS	:	N07718

AWS CHEMICAL COMPOSITION (TYPICAL)

%C	%Cr	%Ni	%Mo	%Ti	%Fe	%Mn	%B
0.08 max. 0.045	17.0 – 21.0 18.5	50.0 – 55.0 53.8	2.80 – 3.30 2.90	0.65 – 1.15 0.95	Rem. 17.7	0.35 max. 0.05	0.006 max. 0.003
%Si	%P	%S	%Cu	%Al	%Nb+Ta	Total Others	
0.35 max. 0.06	0.015 max. 0.007	0.015 max. 0.001	0.30 max. 0.10	0.20 – 0.80 0.55	4.75 – 5.50 5.18	0.50 max.	

TYPICAL WELD METAL MECHANICAL PROPERTIES (AS-WELDED)

Tensile Strength	:	125,000 psi	862 MPa
Yield Strength	:	85,000 psi	586 MPa
Elongation	:	28%	

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 – 180	100% Ar
	1/8	3.2 mm	15 – 20	150 – 220	100% Ar
MIG (GMAW)	.035"	0.9 mm	26 – 30	150 – 200	75% Ar – 25% He
	.045"	1.1 mm	28 – 32	180 – 230	75% Ar – 25% He
Sub Arc (SAW)	.093"	2.4 mm	28 – 30	275 – 350	
	.125"	3.2 mm	29 – 32	350 – 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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