

## CWR-312 Welding Wire and Rod

CWR-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  
ISO 14343-B : SS 312

### 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	Total Others
0.30 – 0.65 1.80	0.03 max 0.02	0.03 max 0.01	0.75 max 0.15	0.50 max

### TYPICAL WELD METAL MECHANICAL PROPERTIES

Yield Strength : 75,000 psi  
Tensile Strength : 105,000 psi  
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 <sub>2</sub>
	.045"	1.1 mm	29 – 33	180 – 220	98%Ar – 2%O <sub>2</sub>
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.

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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