

## GEN 420 Welding Wire and Rod

GEN 420 is generally used for surfacing applications requiring higher hardness as well as superior abrasion resistance. Pre-heat and inter-pass temperatures of not less than 400°F (204°C) followed by slow cooling is required. Post weld heat treatment is typically used to temper the weld deposit.

### CONFORMANCES

AWS A5.9/A5.9M	:	ER420
ASME SFA-A5.9	:	ER420
UNS	:	S42080

### AWS CHEMICAL COMPOSITION (TYPICAL)

%C	%Cr	%Ni	%Mo	%Mn
0.25 – 0.40	12.0 – 14.0	0.60 max	0.75 max	0.60 max
0.35	12.5	0.13	0.02	0.45
%Si	%P	%S	%Cu	
0.50 max	0.03 max	0.03 max	0.75 max	
0.36	0.016	0.005	0.16	

### TYPICAL WELD METAL MECHANICAL PROPERTIES

Tensile Strength	:	105,000 psi	723 MPa
Yield Strength	:	95,000 psi	655 MPa
Elongation	:	16 %	

### TYPICAL WELDING PARAMETERS

Process	Diameter		Voltage	Amperage	Gas/Flux
TIG (GTAW)	1/16"	1.6 mm	12 – 15	80 – 150	100% Ar
	3/32"	2.4 mm	13 – 16	150 – 250	100% Ar
	1/8"	3.2 mm	14 – 17	200 – 350	100% Ar
MIG (GMAW)	.035"	0.9 mm	24 – 29	150 – 220	98%Ar – 2%O <sub>2</sub>
	.045"	1.1 mm	25 – 30	160 – 260	98%Ar – 2%O <sub>2</sub>
Sub Arc (SAW)	.093"	2.4 mm	28 – 33	250 – 450	
	.125"	3.2 mm	29 – 34	300 – 500	

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

<p><b>IMPORTANT: SPECIAL VENTILATION AND/OR EXHAUST REQUIRED</b></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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