



# HSM Wire International, Inc

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## Alloy 904L

**Description:** Alloy 904L is a non-stabilized low carbon high alloy austenitic stainless steel. The addition of copper to this grade gives it greatly improved resistance to strong reducing acids. It is also highly resistant to chloride attack -both pitting and crevice corrosion cracking.

**Applications:** Used as components in and around the Oil and Gas Industry, and Paper and pulp industry.

<b>Nominal Composition:</b>	<b>Ni</b>	<b>Mo</b>	<b>Cr</b>	<b>Cu</b>	<b>C</b>	<b>Mn</b>	<b>S</b>
	23 - 28	4 - 5	19 - 23	1 - 2	0.02 max	2.0 max	0.035 max
	<b>Si</b>	<b>P</b>	<b>Fe</b>				
	1.0 max	0.045 max	Balance*	<b>* By difference</b>			

## Mechanical and Physical Properties

	Metric Units	
<b>Density</b>	7,950 Kg/cu meter (0.287 lbs/cu in.)	
<b>Specific Gravity</b>	7.95	
<b>Tensile Strength</b>	88,000 psi (605 GPa)	
<b>Yield Strength (0.2% offset)</b>	39,500 psi (270 GPa)	
<b>Elongation</b>	50%	
<b>Average Coefficient of Thermal Expansion</b>	68 - 212°F	8.5 x 10 /°F
	68 - 750°F	9.2 x 10 /°F
	68 - 1475°F	10.1 x 10 /°F
	20 - 100°C	15.3 x 10 /°C
	20 - 400°C	16.5 x 10 /°C
	20 - 800°C	18.2 x 10 /°C
<b>Solidus</b>	2480 °F	
<b>Liquidus</b>	2570 °F	
<b>Heat Capacity</b>	0.107 Btu/Lb-°F	
<b>Thermal Conductivity</b>	77.7 Btu-in/hr-sq.ft.- °F	

\*To be used as a guideline only.

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