

**ER308L or ER304L TIG welding wire** is the industry standard filler metal used to weld **304L austenitic stainless steel**. While 304L wire exists, fabricators universally use **ER308L** because its slightly higher chromium and nickel content provides a stronger, more corrosion-resistant weld microstructure that perfectly matches or exceeds the properties of the 304L base metal.

## Key Specifications & Chemical Composition

The "L" designation stands for **low carbon**, holding the carbon level to a maximum of 0.03%. This low carbon threshold prevents **carbide precipitation** during the intense heat of welding, protecting the finished joint from intergranular corrosion. [\[1, 2\]](#)

Element <a href="#">[1, 2, 3, 4, 5]</a>	Average Composition (%)	Purpose
<b>Carbon (C)</b>	≤ 0.03%	Prevents carbide precipitation and intergranular rust
<b>Chromium (Cr)</b>	19.5% – 22.0%	Provides primary corrosion and oxidation resistance
<b>Nickel (Ni)</b>	9.0% – 11.0%	Stabilizes the austenitic structure and improves toughness
<b>Manganese (Mn)</b>	1.0% – 2.5%	Acts as a deoxidizer