

# STAINLESS STEEL

304 - 1.4301 / 304L - 1.4307

**BORNMORE  
METALS**



## 304 - 1.4301 / 304L - 1.4307

304 and 304L are both grades of austenitic stainless steel, which is the most widely used type of stainless steel. These grades are very similar, known for their versatility and corrosion resistance, with the main difference being the carbon content. The use of 304L is often preferred in situations where welding is a significant consideration due to its improved weldability and reduced susceptibility to sensitivity.

### KEY FEATURES

- Corrosion resistance
- Forming and welding characteristics
- Oxidation resistance

### CHEMICAL PROPERTIES

	Chromium (Cr)	Nickel (Ni)	Manganese (Mn)	Silicone (Si)	Nitrogen (N)	Carbon (C)	Phosphorus (P)	Sulphur (S)
<b>304</b>	<b>18-20%</b>	<b>8-11%</b>	<b>2%</b>	<b>1%</b>	<b>0.1%</b>	<b>0.08%</b>	<b>0.045%</b>	<b>0.03%</b>
<b>304L</b>	<b>18-20%</b>	<b>8-11%</b>	<b>2%</b>	<b>1%</b>	<b>0.1%</b>	<b>0.035%</b>	<b>0.045%</b>	<b>0.03%</b>

### MECHANICAL PROPERTIES

	304	304L
Tensile strength (N/mm <sup>2</sup> )	<b>500-700</b>	<b>500-700</b>
Yield strength (N/mm <sup>2</sup> )	<b>170-220</b>	<b>170-220</b>
Elongation (% in 4D)	<b>40</b>	<b>40</b>
Hardness - Rockwell (HRB) max	<b>92</b>	<b>92</b>
Hardness - Brinell (HB) max	<b>201</b>	<b>201</b>

### PHYSICAL PROPERTIES

Density (kg/m <sup>3</sup> )	<b>8000</b>
Modulus of elasticity (Gpa)	<b>193</b>
Mean coefficient of thermal expansion	0-100°C (µm/m/°C) <b>17.2</b>
	0-350°C (µm/m/°C) <b>17.8</b>
	0-538°C (µm/m/°C) <b>18.4</b>
Thermal conductivity	at 100°C (W/m.K) <b>16.2</b>
	at 500°C (W/m.K) <b>21.5</b>
Specific Heat 0-100°C (J/kg.K)	<b>500</b>
Electrical resistivity (nΩ.m)	<b>720</b>
Melting point (°C)	<b>1450</b>

### MARKET SECTORS



Tanks, pipes, conveyor systems



Storage tanks, vessels for chemicals, piping systems



Handrails, architectural trim, structural components



Countertops, sinks, ovens, refrigerators, dishwashers



Surgical instruments, processing equipment, storage



Fasteners, bolts, valves, fittings