1.4539 / AISI 904L is a high-alloy austenitic stainless steel with a high molybdenum content, additional copper content and very low carbon content.

**Special properties**

Excellent corrosion resistance to sulfuric and phosphoric conditions. High resistance to localized corrosion such as pitting and crevice corrosion, as well as to stress-corrosion.

**Chemical Composition**

<table>
<thead>
<tr>
<th>Element</th>
<th>C %</th>
<th>Si %</th>
<th>Mn %</th>
<th>P %</th>
<th>S %</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>≤ 0.02</td>
<td>≤ 0.70</td>
<td>2.00</td>
<td>0.03</td>
<td>0.01</td>
</tr>
<tr>
<td>Cr</td>
<td>19.0-21.0</td>
<td>4.00-5.00</td>
<td>24.0-26.0</td>
<td>≤ 0.15</td>
<td>1.20-2.00</td>
</tr>
<tr>
<td>Mo</td>
<td>4.00-5.00</td>
<td>24.0-26.0</td>
<td>1.20-2.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ni</td>
<td>24.0-26.0</td>
<td>24.0-26.0</td>
<td>24.0-26.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>·</td>
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</tr>
</tbody>
</table>

**Mechanical Properties 20°C**

- Hardness HB 30 ≤ HB: 230
- 0.2% Yield strength Rp: 230 N/mm²
- Tensile strength Rm: 530-730 N/mm²
- Elongation A5: 35/30 %
- Modulus of elasticity: 195 kN/mm²

**Physical Properties 20°C**

- Density: 8 g/cm³
- Specific heat capacity: 450 J/kg K
- Thermal conductivity: 12 W/m K
- Electrical resistivity: 1 Ω mm²/m

**Suitable welding filler materials**

- 1.4539; 1.4519

**Application**

- Cellulose industry, offshore, refineries, seawater technology, hot sulphuric and phosphoric environment

**Available forms for 1.4539 / AISI 904L**

- Sheets/Plates
- Bars
- Wire
- Tubes/Pipes
- Fittings
- Forged / cast parts
- Finished part (drawing)