308L

DESCRIPTION: Weldcote Metals 308L has the same analysis as type 308 except the carbon content has been held to a maximum of .03% to reduce the possibility of intergranular carbide precipitation. Ideal for welding Types 304L, 321, and 347 stainless steels. This is a suitable wire for applications at cryogenic temperatures.

APPROVALS: Manufactured under Quality System approved by ASME, 1S09001. Meets AWS 5.9 Class ER308L. Approved by Canadian Welding Bureau.

CHEMICAL COMPOSITION

<table>
<thead>
<tr>
<th>Element</th>
<th>Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon</td>
<td>0.030</td>
</tr>
<tr>
<td>Manganese</td>
<td>1.000-2.500</td>
</tr>
<tr>
<td>Silicon</td>
<td>0.300-0.650</td>
</tr>
<tr>
<td>Chromium</td>
<td>19.500-21.000</td>
</tr>
<tr>
<td>Nickel</td>
<td>9.000-11.000</td>
</tr>
<tr>
<td>Molybdenum</td>
<td>0.300</td>
</tr>
<tr>
<td>Sulfur</td>
<td>0.020</td>
</tr>
<tr>
<td>Phosphorus</td>
<td>0.030</td>
</tr>
<tr>
<td>Copper</td>
<td>0.300</td>
</tr>
</tbody>
</table>

MECHANICAL PROPERTIES

- **Tensile Strength**: 85,000 PSI (590 MPA)
- **Yield Strength**: 57,000 PSI (390 MPA)
- **Elongation**: 40%

WELDING PARAMETERS

a) **MIG WELDING**: Direct current; Electrode +Ve
   - Shielding Gas: 98/99% Argon + 2/1% Oxygen
     - 97% Argon + 3% CO2
   - Gas Flow: 30 to 50 CFH
   - Voltage: 29 to 33
   - Amperage: 160/180 for .035" (0.9mm)
     - 180/220 for .045" (1.14mm)
     - 210/250 for .062" (1.6mm)
   b) **TIG WELDING**: Direct Current; Electrode –Ve
      - Shielding Gas: 100% Argon
      - Gas Flow: 30 to 40 CFH
   c) **SUB-ARC WELDING**: Direct Current; Electrode + Ve
      - Voltage: 29 to 32
      - Amperage: 300 to 350 for 3/32" (2.5mm)
       - 400 to 550 for 1/8" (3.14mm)
       - 500 to 650 for 5/32" (4.0mm)
      - Speed of Welding: 20 to 30 IPM (500 to 750mm)/min.

Weldcote Metals believes this data to be accurate and to reflect qualified expert opinion regarding current research. However, Weldcote Metals can not make any expressed or implied warranty as to this information.