



## 309L

**DESCRIPTION:** Weldcote Metals 309L is of similar composition as Weldcote Metals 309 except the carbon content has been held to a maximum of .03%. The lower carbon content reduces the possibility of intergranular corrosion. Weldcote Metals 309L is preferred over 309 for cladding over carbon or low alloy steels, as well as for dissimilar joints that undergo heat treatment.

**APPROVALS:** Manufactured under Quality System approved by ASME, ISO9001. Meets AWS5.9 Class ER309L. Approved by Canadian Welding Bureau.

### CHEMICAL COMPOSITION

Carbon	0.030
Manganese	1.000-2.500
Silicon	0.300-0.650
Chromium	23.000-25.000
Nickel	12.000-14.000
Molybdenum	0.300
Sulfur	0.020
Phosphorus	0.030
Copper	0.300

### MECHANICAL PROPERTIES

<b>Tensile Strength</b>	
85,000 PSI	590 MPA
<b>Yield Strength</b>	
58,000 PSI	400MPA
<b>Elongation</b>	
36%	

### WELDING PARAMETERS

- a) **MIG WELDING:**
  - Shielding Gas: Direct current; Electrode +Ve  
98/99% Argon + 2/1% Oxygen  
97% Argon + 3% CO<sub>2</sub>
  - 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:**
  - Shielding Gas: Direct Current; Electrode -Ve  
100% Argon
  - Gas Flow: 30 to 40 CFH
- c) **SUB-ARC WELDING:**
  - Voltage: Direct Current; Electrode + Ve  
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.