

## Oxford Alloy® 309/309L-16

AWS E309/309L-16 • Stainless Steel



### Key Features

- ❖ Reduced carbon levels (0.04% max) that offer increased resistance to inter-granular corrosion.
- ❖ Type 309/309L is ideal for joining stainless steels to themselves or to carbon or low alloy steels, and can be used at temperatures of up to 700°F (371°C).
- ❖ Reduced carbon levels help prevent intergranular corrosion.

### Conformances

AWS/ASME SFA 5.4  
E309/309L-16  
UNS W30913  
ABS Approved

### Chemical Composition - As required per AWS 5.4

C	Cr	Ni	Mn	Si	P	S
0.04 max	22.0- 25.0	12.0- 14.0	0.5- 2.5	1.0 max	0.04 max	0.03 max
Cu	Mo					
0.75 max	0.75 max					

### Mechanical Properties - As required by AWS 5.4

	Tensile Strength MPa (ksi)	Yield Strength MPa (ksi)	Elongation %
AWS Requirements	520 (75) min	Not specified	30 min
Typical Results - As welded	550 (80)	410 (59)	45

### Typical Welding Parameters

Diameter		Process	Volt	Amps (flat)	Amps (V/OH)
in	(mm)				
3/32"	(2.4)	SMAW	24-28	70-85	65-75
1/8"	(3.2)	SMAW	26-30	85-110	80-90
5/32"	(4.0)	SMAW	28-32	110-140	100-120
3/16"	(4.8)	SMAW	28-32	120-160	110-130

### Diameters & Packaging

Oxford Alloys USA			Oxford Alloys Asia Pacific		
Diameter (in)	Length (in)	Packaging (lbs)	Diameter (mm)	Length (mm)	Packaging (kgs)
3/32"	12	10 lb tube   30 lb carton	2.6	300	4 kg tube   12 kg carton
1/8"	14	10 lb tube   30 lb carton	3.2	350	5 kg tube   15 kg carton
5/32"	14	10 lb tube   30 lb carton	4.0	350	5 kg tube   15 kg carton
3/16"	14	10 lb tube   30 lb carton	5.0	350	5 kg tube   15 kg carton

Actual test results may vary. Refer test result disclaimer on page 160.