

Oxford Alloy® 347

AWS ER347 • Stainless Steel



Key Features

- ❖ Niobium stabilized stainless steel used for the welding of types 347 and 321 stainless and stainless clad steels.
- ❖ The addition of niobium reduces intergranular corrosion in severe operating conditions.

Conformances

AWS/ASME SFA 5.9
ER347
UNS S34780

Chemical Composition - As required per AWS 5.9

C	Mn	Si	Cr	Ni	Mo	S
0.08 max	1.0-2.5	0.30-0.65	19.0-21.5	9.0-11.0	0.75 max	0.03 max
P	Cu	Nb+Ta				
0.03 max	0.75 max	10 X C min / 1.0 max				

Mechanical Properties - As required by AWS 5.9

	Tensile Strength MPa (ksi)	Yield Strength MPa (ksi)	Elongation %
AWS Requirements	Not Specified		
Typical Results - As welded	620 (90)	450 (65)	41

Typical Welding Parameters					
Diameter		Process	Volt	Amps	Shielding Gas
in	(mm)				
.035	0.9	GMAW	22-23	180-210	Spray Transfer 98% Argon / 2% Oxygen
.045	1.2	GMAW	23-25	195-260	
1/16	1.6	GMAW	25-28	260-390	
.035	0.9	GMAW	19-23	55-170	Short Circuiting Transfer 90% Helium / 7 1/2 % Argon / 2 1/2 CO ₂
.045	1.2	GMAW	19-23	100-185	
1/16	1.6	GMAW			
1/16	1.6	GTAW	14-18	90-130	100% Argon
3/32	2.4	GTAW	15-20	120-175	100% Argon
1/8	3.2	GTAW	15-20	150-220	100% Argon

Diameters & Packaging					
Oxford Alloys USA			Oxford Alloys Asia Pacific		
Diameter (in)	Form	Packaging (lbs)	Diameter (mm)	Form	Packaging (kgs)
.035	GMAW	33 lb spool 1980 lb pallet	0.9	GMAW	15 kg spool 900 kg pallet
.045	GMAW	33 lb spool 1980 lb pallet	1.2	GMAW	15 kg spool 900 kg pallet
1/16	GMAW	33 lb spool 1980 lb pallet	1.6	GMAW	15 kg spool 900 kg pallet
1/16	GTAW	10 lb tube 40 lb carton	1.6	GTAW	5 kg tube 20 kg carton
3/32	GTAW	10 lb tube 40 lb carton	2.4	GTAW	5 kg tube 20 kg carton
1/8	GTAW	10 lb tube 40 lb carton	3.2	GTAW	5 kg tube 20 kg carton

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