

MIG & TIG

Oxford Alloy® 617

AWS ERNiCrCoMo-1 • Nickel Alloys

Key Features

- ❖ For welding of nickel-chrome-cobalt-molybdenum alloys to themselves as well as dissimilar metals such as stainless, carbon or low alloy steels.
- ❖ Also be used for overlay welding where similar chemical composition is desired.
- ❖ The weld metal provides optimum strength and oxidation resistance from 1500°F (815°C) up to 2100°F (1150°C).

Conformances

AWS/ASME SFA 5.14
ERNiCrCoMo-1
UNS N06617

Chemical Composition - As required per AWS 5.14

Ni	Cr	Co	Mo	Al	C	Fe
Bal	20.0-24.0	10.0-15.0	8.0-10.0	0.8-1.5	0.05-0.15	3.0 max
Mn	Si	S	Ti	Cu	P	OET
1.0 max	1.0 max	0.015 max	0.60 max	0.50 max	0.03 max	0.50 max

Mechanical Properties - As required by AWS 5.14

	Tensile Strength MPa (ksi)	Yield Strength MPa (ksi)	Elongation %
AWS Requirements	620 (90) typical	Not Specified	Not Specified
Typical Results - As welded	770 (112)	610 (89)	28



Diameter		Typical Welding Parameters			
in	(mm)	Process	Volt	Amps	Shielding Gas
.035	0.9	GMAW	26-29	150-190	Spray Transfer 100% Argon
.045	1.2	GMAW	28-32	180-220	
1/16	1.6	GMAW	29-33	200-250	
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.