

MIG & TIG

Oxford Alloy® C-276

AWS ERNiCrMo-4 • Nickel Alloys

Key Features

- ❖ For welding materials of similar composition. This low carbon, nickel-chromium-molybdenum filler metal can also be used for dissimilar welding between nickel base alloys and stainless steels, as well as for surfacing and cladding.
- ❖ Due to high molybdenum content, this alloy offers excellent resistance to stress corrosion cracking and pitting and crevice corrosion.

Conformances

AWS/ASME SFA 5.14
ERNiCrMo-4
UNS N10276

Chemical Composition - As required per AWS 5.14

C	Mn	Si	Cr	Mo	W	S
0.02 max	1.0 max	0.08 max	14.5-16.5	15.0-17.0	3.0-4.5	0.03 max
P	V	Ni	Fe	Cu	Co	OET
0.04 max	0.35 max	Bal	4.0-7.0	0.50 max	2.5 max	0.50 max

Mechanical Properties - As required by AWS 5.14

	Tensile Strength MPa (ksi)	Yield Strength MPa (ksi)	Elongation %
AWS Requirements	690 (100) typical	Not Specified	Not Specified
Typical Results - As welded	730 (106)	540 (79)	39



Typical Welding Parameters					
Diameter		Process	Volt	Amps	Shielding Gas
in	(mm)				
.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.