

Oxford Alloy® 622

AWS ERNiCrMo-10 • Nickel Alloys



Key Features

- ❖ A nickel based alloy with chromium, molybdenum, and tungsten as the principal alloying elements.
- ❖ Used to weld alloys of similar composition as well as dissimilar joints between nickel-chromium-molybdenum alloys and stainless or carbon or low alloy steels.
- ❖ For cladding overlay as well as thermal spray applications.
- ❖ It offers an outstanding resistance to stress corrosion cracking, pitting and crevice corrosion.

Conformances

AWS/ASME SFA 5.14
ERNiCrMo-10
UNS N06022

Chemical Composition - As required per AWS 5.14

C	Mn	Si	Fe	S	P	Cr
0.015 max	0.50 max	0.08 max	2.0-6.0	0.010 max	0.02 max	20.0-22.5
Mo	W	Ni	Cu	Co	V	OET
12.5-14.5	2.5-3.5	Bal	0.50 max	2.5 max	0.35 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	790 (115)	570 (82)	38

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.