Oxford Alloy® 61

AWS ERNi-1 • Nickel Alloys

Key Features

- For welding of nickel 200 or 201.
- Also for overlay on steel as well as repairing cast iron castings.
- It can also be used for dissimilar joints between nickel or nickel alloys to stainless or ferritic steels.

Conformances

AWS/ASME SFA 5.14
ERNi-1
UNS N02061

Chemical Composition - As required per AWS 5.14

Ni	C	Mn	Fe	S	Si	Cu
93.0 min	0.15 max	1.0 max	1.0 max	0.015 max	0.75 max	0.25 max
Al	**Ti**	**P**	**OET**			
1.5 max	2.0-3.5	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	380 (55) typical	Not Specified	Not Specified
Typical Results - As welded	460 (67)	260 (38)	28

Typical Welding Parameters

Diameter in	Diameter (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.