

MIG & TIG

Oxford Alloy® 825

AWS ERNiFeCr-1 • Nickel Alloys

Key Features

- ❖ Used for welding of nickel-chromium-molybdenum-copper alloys.
- ❖ Also can be used to overlay cladding where similar chemical composition is required.

Conformances

AWS/ASME SFA 5.14
ERNiFeCr-1
UNS N08065

Chemical Composition - As required per AWS 5.14

Ni	C	Mn	Fe	S	Si	Cu
38.0-46.0	0.05 max	1.0 max	22.0 min	0.03 max	0.50 max	1.5-3.0
Cr	Al	Ti	Mo	P	OET	
19.5-23.5	0.20 max	0.60-1.20	2.50-3.50	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	550 (80) typical	Not Specified	Not Specified
Typical Results - As welded	550 (80)		25



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	100% Argon
1/16	1.6	GTAW	14-18	90-130	
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.