

COATED ELECTRODES

Oxford Alloy® 141

AWS ENi-1 • Nickel Alloys

Key Features

- ❖ Welding of cast and wrought forms of pure nickel alloys.
- ❖ These electrodes can also be used for surfacing as well as dissimilar welding between nickel or mild steel, and stainless steel.

Conformances

AWS/ASME SFA 5.11

ENi-1

UNS W82141

Chemical Composition - As required per AWS 5.11

Ni	C	Mn	Fe	S	Si	Cu
92.0 min	0.10 max	0.75 max	0.75 max	0.02 max	1.25 max	0.25 max
Al	Ti	P	OET			
1.0 max	1.0-4.0	0.03 max	0.50 max			

Mechanical Properties - As required by AWS 5.11

	Tensile Strength MPa (ksi)	Yield Strength MPa (ksi)	Elongation %
AWS Requirements	410 (60) min	Not Specified	20 min
Typical Results - As welded	500 (73)	400 (58)	26



Typical Welding Parameters

Diameter		Process	Volt	Amps (flat)	Amps (V/OH)
in	(mm)				
3/32	(2.4)	SMAW	24-28	70-85	65-75
1/8	(3.2)	SMAW	26-30	85-110	80-90
5/32	(4.0)	SMAW	28-32	110-140	100-120
3/16	(4.8)	SMAW	28-32	120-160	110-130

Diameters & Packaging

Oxford Alloys USA			Oxford Alloys Asia Pacific		
Diameter (in)	Length (in)	Packaging (lbs)	Diameter (mm)	Length (mm)	Packaging (kgs)
3/32"	12	10 lb tube 30 lb carton	2.6	300	4 kg tube 12 kg carton
1/8"	14	10 lb tube 30 lb carton	3.2	350	5 kg tube 15 kg carton
5/32"	14	10 lb tube 30 lb carton	4.0	350	5 kg tube 15 kg carton
3/16"	14	10 lb tube 30 lb carton	5.0	350	5 kg tube 15 kg carton

Actual test results may vary. Refer test result disclaimer on page 160.