

COATED ELECTRODES

Oxford Alloy® 55

AWS ENiFe-CI • Nickel Alloys

Key Features

- ❖ Used for welding of cast irons to other cast irons as well as for joining cast irons to mild steels.
- ❖ Readily used for the repair of castings. The welds are moderately hard and require carbide tipped tools for machining.
- ❖ A preheat and inter-pass temperature of not less than 350°F is required during welding to prevent cracking.

Conformances

AWS/ASME SFA 5.15

ENiFe-CI

UNS W82002

Chemical Composition - As required per AWS 5.15

Ni	C	Mn	Fe	S	Si	Cu
45.0-60.0	2.0 max	2.5 max	Bal	0.03 max	4.0 max	2.5 max
Al	OET					
1.0 max	1.0 max					

Mechanical Properties - As required by AWS 5.15

	Tensile Strength MPa (ksi)	Yield Strength MPa (ksi)	Elongation %
AWS Requirements	400-579 (58-84)	296-434 (43-63)	6-18
Typical Results - As welded	490 (71)	365 (53)	12



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.