Oxford Alloy® 99

AWS ENi-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 and stainless steels.
- It is also readily used for the repair of castings. The welds produced are generally more machinable than a Oxford Alloy® 55 deposit.
- 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
ENi-CI
UNS W82001

Chemical Composition - As required per AWS 5.15						
Ni	**C**	**Mn**	**Fe**	**S**	**Si**	**Cu**
85.0 min	2.0 max	2.5 max	8.0 max	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	276-448 (40-65)	262-414 (38-60)	3-6
Typical Results - As welded	362 (53)	338 (49)	5

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.