Oxford Alloy® 82

AWS ERNiCr-3 • Nickel Alloys

Key Features

- For welding of base materials such as ASTM B163, B166, B167 and B168 – alloys which have UNS Number N06600.
- Suitable for applications ranging from cryogenic to high temperatures making this alloy one of the most used in the nickel family.
- Also be used for dissimilar welding applications between various nickel alloys and stainless or carbon steels, as well as for overlay.

Conformances

AWS/ASME SFA 5.14
ERNiCr-3
UNS N06082

Chemical Composition - As required per AWS 5.14

Ni	C	Mn	Fe	S	Si	Cr
67.0 min	0.10 max	2.5-3.5	3.0 max	0.015 max	0.50 max	18.0-22.0
Ti	**P**	**Nb+Ta**	**Cu**	**OET**		
0.75 max	0.03 max	2.0-3.0	0.50 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	460 (67)	260 (38)	28

Typical Welding Parameters

Diameter in	Diameter (mm)	Process	Volt	Amps	SAW Flux
3/32	2.4	SAW	28-30	275-350	Suitable Flux
1/8	3.2	SAW	29-32	350-450	NiCrW

Diameters & Packaging

Oxford Alloys USA			Oxford Alloys Asia Pacific		
Diameter (in)	Form	Packaging (lbs)	Diameter (mm)	Form	Packaging (kgs)
3/32	SAW	60 lb Coil | 1800 lb pallet	2.4	SAW	25 kg Coil | 750 kg pallet
1/8	SAW	60 lb Coil | 1800 lb pallet	3.2	SAW	25 kg Coil | 750 kg pallet

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