

SAW & FLUX

Oxford Alloy® 625

AWS ERNiCrMo-3 • Nickel Alloys

Key Features

- ❖ Contains low iron (Fe less than 1%) and is used for welding of nickel-chromium-molybdenum alloys.
- ❖ Also for cladding and welding dissimilar base metals such as Ni-Cr-Mo alloys to stainless and carbon steels.
- ❖ The Ni-Cr-Mo alloy system provides excellent resistance to oxidizing and reducing environments. The high molybdenum content provides good stress, pitting and crevice corrosion resistance.

Conformances

AWS/ASME SFA 5.14
ERNiCrMo-3
UNS N06625
ABS Approved



Chemical Composition - As required per AWS 5.14						
Ni	C	Mn	Fe	S	Si	P
58.0 min	0.10 max	0.50 max	5.0 max	0.015 max	0.50 max	0.02 max
Cr	Al	Nb+Ta	Mo	Ti	Cu	OET
20.0-23.0	0.40 max	3.15-4.15	8.0-10.0	0.40 max	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	760 (110) typical	Not Specified	Not Specified
Typical Results - As welded	790 (115)	590 (85)	35

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

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.