



Supplier of Welding Alloys

## Titanium and Zirconium TIG Wire

### Oxford Alloy® Ti-1

**SPECIFICATIONS**

AWS 5.16  
ASME SFA 5.16

**CLASSIFICATIONS**

AWS ERTi-1  
UNS R50100

**DESCRIPTION / APPLICATION**

Oxford Alloy ERTi-1 can be welded by the gas tungsten arc, plasma arc, and gas metal arc processes. The procedures and equipment are generally similar to those used for welding stainless steel or aluminum. Titanium and titanium alloys are extremely reactive above 1000 °F. Additional precautions, exceeding those required during the welding of austenitic stainless steel or aluminum alloys, must be taken to shield the weld and hot root side of the joint from air. In welding titanium or titanium alloys, only argon and helium, and occasionally a mixture of these two gases, are used for shielding. The filler metal composition is usually matched to the grade of titanium being welded. The filler metal and the base metal should be meticulously cleaned at the time of welding. Grease and oil accumulated during forming and machining must also be removed before welding to avoid weld contamination.

AWS Chemical Composition						
C	O	H	N	Fe	Ti	
0.03 max	0.03-0.10	0.005 max	0.012 max	0.08 max	Bal	

**TYPICAL MECHANICAL PROPERTIES**

Tensile strength: 34,800 psi 240 MPa  
Yield strength: 24,650 psi 170 MPa  
Elongation: 24%

Please contact our sales department for more information at 800-562-3355 or 225-273-4800.

Data contained in this publication are typical of the products and properties described, but are not suitable for specifications.  
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