

## Nickel Alloy TIG • MIG • SAW Wire

### Oxford Alloy<sup>®</sup> 601

#### SPECIFICATIONS

AWS 5.14  
ASME SFA 5.14

#### CLASSIFICATIONS

AWS ERNiCrFe-11  
UNS N06601

#### DESCRIPTION / APPLICATION

Oxford Alloy 601 is used for the welding of alloy 601. The GTAW process with Oxford Alloy 601 is the only recommended joining method for applications involving temperature over 2100°F (1150°C) or for applications at lower temperatures involving exposure to hydro- gen sulfide or sulfur dioxide. The weld metal of this filler metal is comparable to the base metal in resistance to corrosion and oxidation.

#### AWS Chemical Composition

| Ni        | Cr        | Fe       | Al       | C        | Mn      | S         |
|-----------|-----------|----------|----------|----------|---------|-----------|
| 58.0-63.0 | 21.0-25.0 | Bal      | 1.0-1.7  | 0.10 max | 1.0 max | 0.015 max |
| Si        | Cu        | P        | OET      |          |         |           |
| 0.50 max  | 1.0 max   | 0.03 max | 0.50 max |          |         |           |

#### TYPICAL MECHANICAL PROPERTIES

Tensile strength: 94,000 psi 648 MPa

Elongation: 42%

#### Typical Welding Parameters

| Process | Diameter      | Volt  | Amp     | Shield Gas                 |
|---------|---------------|-------|---------|----------------------------|
| GTAW    | 1/16 (1.6mm)  | 14-18 | 90-130  | 100% Argon                 |
| GTAW    | 3/32 (2.4mm)  | 15-20 | 120-75  |                            |
| GTAW    | 1/8 (3.2mm)   | 15-20 | 150-220 |                            |
| GMAW    | .035 (0.9mm)  | 26-29 | 150-190 | 75% Ar / 25% He or 100% Ar |
| GMAW    | .045 (1.14mm) | 28-32 | 180-220 |                            |
| GMAW    | 1/16 (1.6mm)  | 29-33 | 200-250 |                            |
| SAW     | 3/32 (2.4mm)  | 28-30 | 275-350 | Suitable Flux              |
| SAW     | 1/8 (3.2mm)   | 29-32 | 350-450 |                            |



Data contained in this publication are typical of the products and properties described, but are not suitable for specifications. Certified Material Test Certificates (CMTR) and Material Safety Data Sheets (MSDS) are available at [www.oxfordalloys.com](http://www.oxfordalloys.com).

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**Baton Rouge, LA**  
2632 Tee Drive  
Baton Rouge, LA 70814  
Phone: 800-562-3355  
Fax: 225-273-4814

**Chicago, IL**  
805 Bonnie Lane  
Elk Grove Village, IL  
Phone: 800-562-3355  
Fax: 225-273-4814

**Houston, TX**  
1486 North Post Oak  
Houston, TX 77055  
Phone: 800-562-3355  
Fax: 225-273-4814

**Oxford Alloys Asia Pacific Pte. Ltd.**  
6 Serangoon North Ave 5 #05-05  
Singapore 554910  
Phone: +65 6933- 3570  
Fax: +65 6484- 5772