Key Features
- Excellent strength to weight ratio
- Higher strength at ambient temperatures than Grades 1 and 2
- Good creep resistance up to approx 300 °C (570 °F)
- Outstanding resistance to corrosion in most natural and many industrial process environments
- Approximately half the density of nickel alloys

TITANIUM Gr. 5 / 6Al4V available in:-
- Round wire
- Bars or lengths
- Flat wire
- Shaped wire
- Rope/Strand

Packaging
- Coils
- Spools
- Bars or lengths

IMPORTANT
We will manufacture to your required mechanical properties.

HOW CAN I HELP?
- Wire to your spec
- Technical support
- E.M.S available
- Delivery: within 3 weeks

0.025mm to 21mm
(.001" to .827")
Order 3m to 3t
(10 ft to 6000 Lbs)

Technical Datasheet AWS 151 Rev.2

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## Specifications

<table>
<thead>
<tr>
<th>Element</th>
<th>Min %</th>
<th>Max %</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>-</td>
<td>0.05</td>
</tr>
<tr>
<td>C</td>
<td>-</td>
<td>0.10</td>
</tr>
<tr>
<td>H</td>
<td>-</td>
<td>0.01</td>
</tr>
<tr>
<td>Fe</td>
<td>-</td>
<td>0.40</td>
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<tr>
<td>O</td>
<td>-</td>
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<tr>
<td>Al</td>
<td>5.50</td>
<td>6.75</td>
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<tr>
<td>V</td>
<td>3.50</td>
<td>4.50</td>
</tr>
<tr>
<td>Ti</td>
<td>BAL</td>
<td></td>
</tr>
</tbody>
</table>

### Key Features

- Excellent strength to weight ratio
- Higher strength at ambient temperatures than Grades 1 and 2
- Good creep resistance up to approx. 300 °C (570 °F)
- Outstanding resistance to corrosion in most natural and many industrial process environments
- Approx. half the density of nickel alloys

### Typical Applications

- Aerospace
- Jewellery
- Chemical
- Springs
- Bolts and various fasteners

### Designsations

- W.Nr. 3.7165
- W.Nr. 3.7164
- UNS R56400
- AWS 151

### Chemical Composition

<table>
<thead>
<tr>
<th>Element</th>
<th>Min %</th>
<th>Max %</th>
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<tbody>
<tr>
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<td></td>
</tr>
</tbody>
</table>

### Density

- 4.42 g/cm³
- 0.16 lb/in³

### Melting Point

- 1650 °C
- 3000 °F

### Coefficient of Expansion

- 9.0 μm/m °C (20 – 100 °C)
- 5.0 x 10⁻⁶ in/in °F (70 – 212 °F)

### Modulus of Rigidity

- 40 – 44 kN/mm²
- 5800 – 6380 ksi

### Modulus of Elasticity

- 105 – 120 kN/mm²
- 15230 – 17405 ksi

### Heat Treatment of Finished Parts

<table>
<thead>
<tr>
<th>Condition as supplied by Alloy Wire</th>
<th>Type</th>
<th>Temperature °C</th>
<th>Time (Hr)</th>
<th>Cooling</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annealed</td>
<td>Stress Relieve</td>
<td>480</td>
<td>900</td>
<td>2</td>
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<tr>
<td>Spring Temper</td>
<td>Stress Relieve</td>
<td>250</td>
<td>480</td>
<td>0.5</td>
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</tbody>
</table>

### Properties

<table>
<thead>
<tr>
<th>Condition</th>
<th>Approx. tensile strength N/mm²</th>
<th>Approx. operating temperature °C °F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annealed</td>
<td>950 – 1100</td>
<td>-200 to +400</td>
</tr>
<tr>
<td>Spring Temper</td>
<td>1000 – 1400</td>
<td>-200 to +400</td>
</tr>
</tbody>
</table>

The above tensile strength ranges are typical. If you require different please ask.