Titanium 6-2-4-6 is a heat treatable alpha-beta alloy, with which you can achieve higher strengths than with Titanium 6/4. The advantages of Titanium 6-2-4-6 are an increased strength, low cycle fatigue and its ductility. It has a high strength at temperatures up to 450 °C.

Advantages of Titanium 6Al/2Sn/4Zr/6Mo
- Low modulus of Elasticity
- Low Density to Weight Ratio
- Resistance to Fatigue
- Heat Treatable to attain higher strengths

### Material Data Sheet

<table>
<thead>
<tr>
<th>Alloy</th>
<th>Ti6Al2Sn4Zr6Mo</th>
</tr>
</thead>
<tbody>
<tr>
<td>UNS</td>
<td>UNS R56260</td>
</tr>
<tr>
<td>Norm</td>
<td>Titanium 6-2-4-6</td>
</tr>
</tbody>
</table>

### Main fields of application of alloy Ti-Gr-6-2-4-6

Typical applications are in the intermediate stage compressors turbines, discs, blades and sour gas applications as well as in oil and gas industry.

### Chemical composition of alloy Ti-Gr-6-2-4-6

<table>
<thead>
<tr>
<th>Element</th>
<th>Percentage Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Al</td>
<td>≤ 5.5 &lt; 6.5</td>
</tr>
<tr>
<td>Su</td>
<td>≤ 1.75 &lt; 2.25</td>
</tr>
<tr>
<td>Zr</td>
<td>≤ 3.6 &lt; 4.4</td>
</tr>
<tr>
<td>Mo</td>
<td>≤ 5.5 &lt; 6.5</td>
</tr>
<tr>
<td>Fe</td>
<td>≤ 0.015 max</td>
</tr>
<tr>
<td>O</td>
<td>≤ 0.15 max</td>
</tr>
<tr>
<td>C</td>
<td>≤ 0.04 max</td>
</tr>
<tr>
<td>N</td>
<td>≤ 0.04 max</td>
</tr>
<tr>
<td>H</td>
<td>≤ 0.125 max</td>
</tr>
<tr>
<td>Cu</td>
<td>≤ 0.50</td>
</tr>
<tr>
<td>Fe</td>
<td>≤ 1.5</td>
</tr>
<tr>
<td>Res</td>
<td>≤ 0.30</td>
</tr>
</tbody>
</table>

### Properties

- **Melting Range:** 1595- 1675°C
- **Density:** 4.64 g/cm³
- **Modulus:** 20° C 70-114 GPa
- **Beta Transus:** 935°C

Fatigue Failure and good resistance to fatigue

### Specifications

The Hempel stock typically meets the following requirements:

- MIL-T-9047
- AMS 2631 Class A

The material is delivered with 3.1 certification. 3.2 Certification is available at extra cost.

### Filler metal

not available

### Delivery program

The Hempel Special Metal delivery program for Titanium 6-2-4-6 contains:

- Sheets and plates 1.6 mm - 40 mm
- Bars dia. 12 mm - 150 mm

### Material Outlet by Hempel

ECONOXX.com offers buyers a new and uncomplicated procurement channel, which also includes small quantities and materials in special alloys at favourable conditions.
29.10.2020

Contact us

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