Titanium Alloy
Ti5553
Ti-5Al-5Mo-5V-3Cr

SPECIFICATIONS

TYPICAL MECHANICAL PROPERTIES

- Heat treated condition: (STA Solution Treated and Aged)
  - Tensile test at ambient temperature:
    - UTS: 1050 to 1250 N/mm²
    - 0.2 % Yield strength: 1000 to 1100 N/mm²
    - Elongation (5d): 5 to 12 %
    - $K_{IC}$: 55 MPa√m

- Heat treated condition: (BASCA: Banneled, slow cool and aged)
  - UTS: 1100 N/mm²
  - 0.2 % Yield strength: 950 N/mm²
  - Elongation (5d): 6 %
  - $K_{IC}$: 70 MPa√m

COMPOSITION

<table>
<thead>
<tr>
<th>Element</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum</td>
<td>5.00</td>
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<tr>
<td>Molybdenum</td>
<td>5.00</td>
</tr>
<tr>
<td>Vanadium</td>
<td>2.00</td>
</tr>
<tr>
<td>Chromium</td>
<td>3.00</td>
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<tr>
<td>Titanium</td>
<td>Base</td>
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</tbody>
</table>

APPLICATIONS

- Structural parts.
- Landing gear.

CHARACTERISTICS

- Quasi-beta titanium alloy.
**HEAT TREATMENT**

- This alloy is generally delivered in the heat treated condition for high strength applications.

**PHYSICAL PROPERTIES**

- Density: 4.64

- Critical points:
  - Beta Transus: 860°C