



# Titanium Ti64 Grade 5

## Alternative Designations

3.7164 / 3.7165 / Ti-6Al-4V

## Key Features

Stiffness • Corrosion resistance • Low weight  
• High fatigue resistance • Heat treatment is recommended to relieve stresses and increase ductility

## Product Description

Titanium Ti64 Grade 5 is a Ti6Al4V alloy known for its low density, high strength, and excellent corrosion resistance. It offers higher fatigue resistance than other lightweight alloys and is lighter than superalloys and steels. Parts made from Titanium Ti64 Grade 5 can be machined, shot-peened, and polished in both as-manufactured and heat-treated states. Due to the layerwise building method, parts may exhibit anisotropy; heat treatment is recommended to reduce internal stresses and enhance ductility. Typical applications include aerospace and automotive components, as well as other industrial uses requiring low weight and high strength.

## Properties\*

Yield strength (xy/z)	970 / 1,010 MPa
Tensile strength	1,080 MPa
Elongation at break (xy/z)	14 / 15%
Fatigue strength (at 1x10 <sup>-7</sup> cycles)	595 MPa
Coefficient of thermal expansion (25 – 100 °C)	9.0 *10 <sup>-6</sup> /K
Density	4.4 g/cm <sup>3</sup>
Hardness	30 - 35 HRC
Corrosion resistance	4/5

\*Heat treated state, 40 µm layer thickness

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## Applications

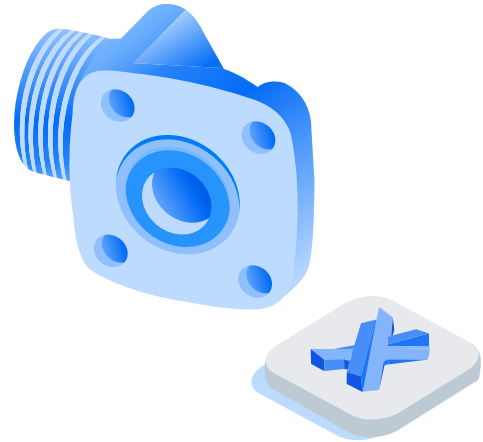
Aerospace

Automotive

Engineering

End-use parts

Where low weight in combination with high strength are required



## Chemical Composition

Ti	Balance	Fe	0.3
Al	5.5 - 6.75	Y	0.005
V	3.5 - 4.5		
O	0.2		
N	0.05		
C	0.08		
H	0.015		

## Reference

For more detailed source information, please consult the original document linked [here](#). We encourage users to verify the data's relevance and suitability for their specific needs.