

# Titanium Grade 3 (3.7055)

Titanium Grade 3, also known by the material number 3.7055, is a pure titanium alloy that offers a good balance of strength and ductility. It has a higher strength than Grade 1 and Grade 2, while still offering excellent corrosion resistance and good weldability. Titanium Grade 3 is widely used in the chemical process industry, aerospace and other demanding applications.

## Key features of Grade 3 titanium:

- Higher strength than Grade 1 and Grade 2
- Excellent corrosion resistance
- Good formability and weldability

## Chemical analysis of Ti Gr 3

Element	Ti (%)	Fe (%) max.	C (%) max.	N (%) max.	O (%) max.	H (%) max.
Content	Rest	0.30	0.08	0.05	0.35	0.015

## Mechanical properties at room temperature

**Tensile strength:** min. 450 MPa (N/mm<sup>2</sup>)

**Yield strength:** min. 380 MPa (N/mm<sup>2</sup>)

**Elongation:** min. 20%

**Modulus of elasticity (reference value) (GPa):** 105 at room temperature

**Constriction:** min. 25 %

## Heat treatment and processing of titanium grade 3

Grade 3 titanium does not normally require any special heat treatment as it already has the desired mechanical properties as supplied. However, if heat treatment is required, the material can be annealed at temperatures of around 482 to 621 °C to reduce stresses or further optimize the mechanical properties

Welding grade 3 titanium requires an inert gas atmosphere or a vacuum atmosphere to prevent oxidation and contamination. It can be processed using standard welding techniques, but a clean and controlled environment is required..

## Applications:

- Aerospace technology
- Marine and offshore technology
- Medical technology (implants, surgical instruments)
- Heat exchangers and condensers

Please note that the exact specifications and processing parameters may vary depending on the manufacturer and application. For precise applications, we recommend direct consultation with the material manufacturer or a qualified engineer.