

Titanium Grade 4 (3.7065)

Titanium Grade 4, also known by the material number 3.7065, is a pure titanium alloy with the highest strength of the pure titanium grades available on the market. It combines excellent corrosion resistance with good ductility and formability. Ideally suited for demanding applications in the medical, chemical and aerospace industries.

Main features of titanium grade 4 (3.7065):

- Highest strength among the pure titanium grades
- Excellent corrosion resistance
- Good formability and weldability
- Biocompatible, suitable for medical applications

Chemical analysis of Ti Gr 4 (3.7065)

Element	Ti (%)	Fe (%) max.	C (%) max.	N (%) max.	O (%) max.	H (%) max.
Content	Rest	0.50	0.08	0.05	0.40	0.015

Mechanical properties at room temperature

Tensile strength: min. 550 MPa (N/mm²)

Yield strength: min. 485 MPa (N/mm²)

Elongation: min. 15%

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

Constriction: min. 25 %

Heat treatment and processing of titanium grade 4 (3.7065)

Grade 4 titanium does not normally require any special heat treatment as it already has the desired mechanical properties as supplied. 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 4 titanium requires an inert gas atmosphere or a vacuum atmosphere to prevent oxidation and contamination. The material can be processed using standard welding techniques, provided the environment is clean and controlled.

t Applications:

- Chemical process industry
- Aerospace technology
- Marine and offshore technology
- 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.