

Composition and properties of EUTITAN pure titanium

The large range of shapes and weights of titanium allows our consumers to fulfill the needs of nearly all casting machines. Actually we prepare the different ingots or blocs for the new installed milling machines. In this field of activity we follow the constant evolution on the market.

The EUTITAN material is manufactured and tested in accordance with the specification of the norm **ISO 5832-2**. The properties of EUTITAN are completely matching these requirements. All EUTITAN-Products are under control of our notified body and marked **CE 0483**.

The Grade of pure Titanium is corresponding to the content of Oxygen and determines the mechanical property of the material. Pure titanium grade 1 is the soft type, grade 4 is much harder.

Our row material was manufactured and tested in accordance with ASTM B 348.

Chemical analysis %, (standards)

	Grade 1	Grade 2	Grade 4
N, Nitrogen, max	0,03	0,03	0,05
C, Carbon, max	0,08	0,08	0,08
H, Hydrogen, max	0,015	0,015	0,015
Fe, Iron, max	0,2	0,3	0,5
O₂, Oxygen, max	0,18	0,25	0,40
Ti, Titanium, balance	99,5	99,5	99,5

*Mecanical Requirements
(standards)*

	Unit	Grade 1	Grade 2	Grade 4
Yield Strength 0.2%	MPa	170	275	483
Tensile Strength	Mpa	240-390	345-510	480-620
Elongation (min.)	%	28	24	18
Density	G/cm ³	4,5	4,5	4,5
Meltings-temperatur	°C	1700	1700	1700
Coef- of Thermal-dilatation 20 C to 200 C, .	µm/mK	8,7 x 10 ⁻⁶	8,7 x 10 ⁻⁶	8,7 x 10 ⁻⁶
Coef- of Thermal-dilatation 200 C-400 C, ca.	µm/mK	9,7 x 10 ⁻⁶	9,7 x 10 ⁻⁶	9,7 x 10 ⁻⁶