TECHNICAL DATASHEET

Commercially Pure Titanium – Grade 1
FT 004 – Version 0

The four types of commercially pure titanium currently on the market (1/2/3/4) are used for applications requiring good ductility combined with excellent corrosion resistance, moderate strength and good weldability. The limited impurities are iron, oxygen and nitrogen, the variations in content of which define each grade's mechanical properties, from the softest and most ductile (Grade 1) through to the hardest and strongest (Grade 4).

Grade 1 titanium offers the best ductility and formability of the four CP titanium grades, as well as excellent corrosion resistance in oxidising or moderately reducing environments, including chlorides. It has good toughness even at low temperatures, and can be easily welded, machined and deformed at hot and cold.

APPLICATIONS	ADVANTAGES
Industrial Medical Aeronautic	Corrosion resistance Formability Weldability
STANDARDS	**SHAPES**
ASTM B348 / ASME SB348 ASTM B265 / ASME SB265 ASTM F67 ISO 5832-2	**SHEET** Thickness 0.4-5 mm Typical dimensions 1000 x 2000 mm / 1250 x 2500 mm Bars and plates available on request

➢ CHEMICAL COMPOSITION

%	Fe	O	N	C	H	Other (each)	Other (total)	Ti
min								residue
max	0.2	0.18	0.03	0.08	0.015	0.1	0.4	

➢ MECHANICAL PROPERTIES

Rm Tensile strength (MPa)	Rp0.2 Yield strength (MPa)	Elongation (% min)	Necking (% min)
240	138	24	30

➢ PHYSICAL PROPERTIES

Density (g/cm³)	4.51
Hardness (HV)	122
Modulus of elasticity at 20°C (N/mm²)	105 x10³
Thermal conductivity at 20°C (W/m °C)	16
Mean coefficient of thermal expansion at 20-200°C (mm °C)	8.7 x10-6
Beta transus (°C)	888
Fusion temperature (°C)	1670