

Trade name | Ti 6Al-4V

Standards	Material No.	EN Designation	ASTM	UNS
	3.7164/65	Titan Grade 5 (6Al-4V)	Ti-Grade 5 (6 Al 4V)	R56400

Description | Ti-Grade 5; Titanium - 6%Al - 4%V

Special properties | More than 50 % of titanium products worldwide are made from this alloy, either by casting or using a powder metallurgical or a hot forming process. The properties of the diverse product forms depend on the chemical composition and the thermo-mechanical process used. The alloy is generally used in its mill-annealed (= soft annealed) condition, which yields the best combination of strength, toughness and ductility. The alloy is age-hardenable, but only in (wall) thicknesses of up to 25 mm.

Chemical Composition	C %	V %	N %	Ti ≤ %	Al %
	≤ 0.08	3.50-4.50	≤ 0.05	Rest	5.50-6.75
	Fe %	O %	H %		
	≤ 0.40	≤ 0.20	≤ 0.015		

Mechanical Properties 20°C	Hardness HB 30 ≤ HB	0.2% Yield strength R <sub>p</sub> ≥ N/mm <sup>2</sup>	Tensile strength R <sub>m</sub> N/mm <sup>2</sup>	Elongation A <sub>5</sub> ≥ %	Modulus of elasticity kN/mm <sup>2</sup>
	310	830	≥ 895	10	114

Physical Properties 20°C	Density g/cm <sup>3</sup>	Specific heat capacity J/kg K	Thermal conductivity W/m K	Electrical resistivity Ω mm <sup>2</sup> /m
	4.43	560	7.1	1.71

Application | Aerospace industry, chemical industry

Available forms for 3.7164/65 / Ti-Grade 5 (6Al-4V)	Sheets/Plates	Bars	Wire	Tubes/Pipes	Fittings	Forged / cast parts	Finished part (drawing)
							