

Trade name | Ti 6Al-4V (ELI)

Standards	Material No.	EN Designation	ASTM	UNS
	3.7165	Titan Grade 23 (6Al-4V-ELI)	Ti-Grade 23 6 Al-4V ELI	R56401

Description | Ti-Grade 23; Titanium - 6%Al - 4%V, extra low interstitial, (ELI)

Special properties | Ti-Grade 23 ELI is a variant of Ti-Grade 5 and is used in medical technology because of its good biocompatibility and excellent fracture toughness and crack propagation behavior. It maintains its good toughness even at low temperatures down to -253 °C. These properties, as well as its low elastic modulus and good fatigue strength are due to the alloy's relatively low contents of tramp elements such as oxygen and iron (Extra-Low Interstitials).

Chemical Composition	C %	V %	N %	Ti ≤ %	Al %
	≤ 0.08	3.50-4.50	≤ 0.05	Rest	5.50-6.50
	Fe %	O %	H %		
	≤ 0.25	≤ 0.13	≤ 0.015		

Mechanical Properties 20°C	0.2% Yield strength $R_p \geq$ N/mm ²	Tensile strength R_m N/mm ²	Elongation $A_5 \geq$ %	Modulus of elasticity kN/mm ²
	760	825-860	8-10	110

Physical Properties 20°C	Density g/cm ³	Specific heat capacity J/kg K	Thermal conductivity W/m K	Electrical resistivity Ω mm ² /m
	4.45	560	6.9	1.71

Application | Medical technology

Available forms for 3.7165 / Ti-Grade 23 (6Al-4V ELI)	Sheets/Plates	Bars	Wire	Tubes/Pipes	Fittings	Forged / cast parts	Finished part (drawing)
							