

Kormax Titanium Grade 5

Material Data Sheet

Titanium grade 5 (titanium-aluminium-vanadium alloy) is among the most widely used alpha-beta titanium alloys, comprising of 50% of total titanium used globally. One of the prominent properties of Titanium grade 5 is that it is entirely heat treatable, and can be used for the temperature up to 400°C. It combines low density (4.42kg/dm) with outstanding corrosion resistance and good mechanical strength.

Titanium grade 5 has excellent tensile properties at room temperature and has a good creep resistance up to 300°C. It also exhibits excellent resistance against crack propagation and fatigue. The age-hardening ability of titanium grade 5 makes it a perfect choice for various applications, including fasteners and spring. It has a wide range of industrial applications due to its good machinability and weldability.

Chemical Composition (%)

Element		Range %
Aluminium	Al	5.5-6.75
Vanadium	V	3.5-4.5
Iron	Fe	>0.4
Nitrogen	N ₂	>0.05
Carbon	C	>0.08
Oxygen	O ₂	>0.02
Hydrogen	H ₂	>0.015
Titanium	Ti	Balanced

Mechanical Properties

	Metric	Imperial
Tensile Strength min	895 MPa	129,809 psi
Yield Strength 0.2% min	828 MPa	120,091 psi
Elongation min	10%	10%
Area in reduction	25%	25%
Density	4.429 g/cm ³	

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