Data Sheet

Titan Grade 5 / 3.7164 / 3.7165 / Ti-6Al-4V

Alternative Designations

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Key Features

Good strength • Easy machinability • Resistant to corrosion

Description

This contains 6.75% Aluminum, 4.5% vanadium and iron in trace amounts. It has exceptional strength compared to pure titanium but retains the same stiffness and thermal properties. It has easy machinability and weldability. With high strength and corrosion resistance, it can withstand a wide range of adverse environmental factors, including seawater. It is often used in subsea oil and gas structures.

Mechanical Properties

Yield strength	830 MPa
Tensile strength	895 MPa
Elongation at break	10%
Hardness	310
Module of elasticity	114 GPa

Physical Properties

Density	4.43 g/cm³
Electrical conductivity	1.01 m/Ω · mm²
Coefficient of thermal expansion	8.7 K-1 · 10-6
Thermal conductivity	7.1 W/m · K
Specific heat capacity	560 J/kg · K

Chemical Composition

Al	5.5 – 6.75%	N	0.03%
Bi	-	Nb	-
C	0.08%	Ni	-
Cd	-	O	0.25%
Co	-	P	-
Cr	-	Pb	-
Cu	-	S	-
Fe	0.4%	Si	-
H	0.015%	Sn	-
Mg	-	Ti	Rest is Ti
Mn	-	V	-
Mo	-	Zn	-

Reference

Datasheets provided by Xometry contain materials sourced through trusted OEMs, material distributors, and databases. Please visit Materialdatacenter.com for further information on this material.