

**Technical Data:**

**Product Description**

Neway offers titanium alloys for metal injection molding optimized for strength, corrosion resistance, biocompatibility, machinability, and high temperature stability per application needs. Grades include workhorse Ti-6Al-4V, biocompatible Ti-6Al-7Nb, easily machinable Ti-5Al-2.5Fe, weldable Ti-3Al-2.5V, high-strength Ti-15V-3Cr-3Al-3Sn, balanced Ti-10V-2Fe-3Al and corrosion resistant Ti-15Mo-5Zr-3Al. Neway's MIM titanium alloys provide tailored solutions for aerospace, medical, automotive, chemical and industrial applications.

**Features and Applications**

Grade	Features	Applications
Ti-6Al-4V (Grade 5)	High strength-to-weight ratio, corrosion resistance, fatigue strength	Aerospace components, biomedical implants, automotive parts
Ti-6Al-7Nb (Grade 26)	Improved corrosion resistance, biocompatibility, fatigue strength	Biomedical implants, aerospace hydraulic systems
Ti-5Al-2.5Fe (Grade 38)	Good machinability, enforceability, strength, toughness	Automotive valves, sporting equipment, racing components
Ti-3Al-2.5V (Grade 9)	Excellent weldability, ductility, corrosion resistance	Chemical processing equipment, tubing, tanks, pipelines
Ti-15V-3Cr-3Al-3Sn	Very high strength and creep resistance at elevated temperatures	Aerospace compressor parts, turbine blades, fasteners
Ti-10V-2Fe-3Al (Grade 20)	Strength, flexibility, and oxidation resistance up to 600°C	Aircraft engine components, automotive turbochargers
Ti-15Mo-5Zr-3Al (Grade 21)	Outstanding corrosion resistance and stability after aging	Aerospace hydraulic tubing, cryogenic tankage

**Chemical Composition**

Alloy	Titanium (Ti)	Aluminum (Al)	Vanadium (V)	Niobium (Nb)	Molybdenum (Mo)	Iron (Fe)	Chromium (Cr)	Tin (Sn)	Zirconium (Zr)
Ti-6Al-4V (Grade 5)	90%	6%	4%	-	-	-	-	-	-
Ti-6Al-7Nb (Grade 26)	87%	6%	-	7%	-	-	-	-	-
Ti-5Al-2.5Fe (Grade 38)	92.50%	5%	-	-	-	2.50%	-	-	-
Ti-3Al-2.5V (Grade 9)	94.50%	3%	2.50%	-	-	-	-	-	-
Ti-15V-3Cr-3Al-3Sn	75%	3%	15%	-	-	-	3%	3%	-
Ti-10V-2Fe-3Al (Grade 20)	85%	3%	10%	-	-	2%	-	-	-
Ti-15Mo-5Zr-3Al (Grade 21)	77%	3%	-	-	15%	-	-	-	5%

**Note**

The above data are reference material science data. This data reference is not binding and is not considered as authoritative test data. If your material requirements are extremely precise, please contact our material engineers. Tel | +86 18926788217 | Web | [www.newayprecision.com](http://www.newayprecision.com) | Contact Neway



**Physical and Mechanical**

Alloys	Status	Tensile Strength	Yield Strength	Impact Strength	Hardness	Young's Modulus	Poisson's Ratio	Elongation	Density
		Mpa	Mpa	J	HRB	Gpa	Ratio	% in 25.4 mm	g/cm <sup>3</sup>
Ti-6Al-4V (Grade 5)	Sintered	930	860	25	36	114	0.32	15	4.43
Ti-6Al-7Nb (Grade 26)	Sintered	900	820	20	35	105	0.34	18	4.52
Ti-5Al-2.5Fe (Grade 38)	Sintered	950	900	30	38	120	0.29	10	4.48
Ti-3Al-2.5V (Grade 9)	Sintered	860	790	18	33	100	0.36	20	4.36
Ti-15V-3Cr-3Al-3Sn	Sintered	1100	1050	35	42	125	0.27	5	4.62
Ti-10V-2Fe-3Al (Grade 20)	Sintered	980	900	28	39	115	0.3	12	4.54
Ti-15Mo-5Zr-3Al (Grade 21)	Sintered	820	760	15	32	95	0.35	16	4.28

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