

This page is mainly introduced the Ti-5Al-2.5Sn Ti Alloy Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of Ti-5Al-2.5Sn Ti Alloy, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.

Datasheet for Steel Grades Ti Alloy Ti-5Al-2.5Sn Ti Alloy

Ti-5Al-2.5Sn Ti Alloy Standard Number:

ITEM	Standard Number	Descriptions
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Ti-5Al-2.5Sn Ti Alloy Chemical composition (mass fraction) (wt.%)

Chemical			Min.(%)				Max.(%)			
C	Si	Mn	P	S	Cr	Ni	Mo	V	Ta	
W	N	Cu	Co	Pb	B	Nb	Al	Ti	Other	

Category	Titanium Alloy
Class	Wrought
Type	Alpha alloy
Designations	United States: ASTM B265 Grade6, ASTM B348 Grade6, ASTM B381 Grade6, MIL-T-9046, MIL-T-9047, AMS 4926, AMS 4910, AMS 4966, AMS 4953
Composition	
Element	Weight %

Al	5
Sn	2.5

Mechanical Properties			
Properties		Conditions	
		T (°C)	Treatment
Density ($\times 1000$ kg/m ³)	4.48	25	
Poisson's Ratio	0.33	25	
Elastic Modulus (GPa)	110.3	25	
Tensile Strength (Mpa)	565	315 more	annealed
Yield Strength (Mpa)	448		
Elongation (%)	18		
Reduction in Area (%)	45		
Hardness (HRC)	36	25	annealed
Impact Strength (J) (Charpy)	26	25	annealed

Thermal Properties	
Properties	Conditions

		T (°C)	Treatment
Thermal Expansion (10 ⁻⁶ /°C)	9.4	20-100 more	

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Ti-5Al-2.5Sn Ti Alloy Physical Properties		
Tensile strength	115-234	σ_b /MPa
Yield Strength	23	$\sigma_{0.2} \geq$ /MPa
Elongation	65	$\delta_5 \geq$ (%)
ψ	-	$\psi \geq$ (%)
Akv	-	Akv \geq /J
HBS	123-321	-
HRC	30	-

Ti-5Al-2.5Sn Ti Alloy Mechanical Properties		
Tensile strength	231-231	σ_b /MPa
Yield Strength	154	$\sigma_{0.2} \geq$ /MPa
Elongation	56	$\delta_5 \geq$ (%)
ψ	-	$\psi \geq$ (%)
Akv	-	Akv \geq /J
HBS	235-268	-
HRC	30	-

Ti-5Al-2.5Sn Ti Alloy Heat Treatment Regime

Annealing	Quenching	Tempering	Normalizing	Q & T
√	√	√	√	√

Ti-5Al-2.5Sn Ti Alloy Range of products

Product type	Products	Dimension	Processes	Deliver Status
Plates / Sheets	Plates / Sheets	0.08-200mm(T)*W*L	Forging, hot rolling and cold rolling	Annealed, Solution and Aging, Q+T, ACID-WASHED, Shot Blasting
Steel Bar	Round Bar, Flat Bar, Square Bar	Φ8-1200mm*L	Forging, hot rolling and cold rolling, Cast	Black, Rough Turning, Shot Blasting,
Coil / Strip	Steel Coil /Steel Strip	0.03-16.0x1200mm	Cold-Rolled & Hot-Rolled	Annealed, Solution and Aging, Q+T, ACID-WASHED, Shot Blasting
Pipes / Tubes	Seamless Pipes/Tubes, Welded Pipes/Tubes	OD:6-219mm x WT:0.5-20.0mm	Hot extrusion, Cold Drawn, Welded	Annealed, Solution and Aging, Q+T, ACID-WASHED

We can produce Ti Alloy the specifications follows: