

This page is mainly introduced the 99.5 Ti Ti Alloy Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of 99.5 Ti 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 99.5 Ti Ti Alloy

99.5 Ti Ti Alloy Standard Number:

ITEM	Standard Number	Descriptions
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99.5 Ti 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	Commercially Pure
Designations	United States: ASTM B265 Grade1, ASTM B348 Grade1, ASTM B381 Grade1
Composition	
Element	Weight %
Ti	99.5

Mechanical Properties			
Properties		Conditions	
		T (°C)	Treatment
Density (×1000 kg/m ³)	4.51	25	
Poisson's Ratio	0.34	25	
Elastic Modulus (GPa)	102.7	25	
Tensile Strength (Mpa)	152	315 more	annealed
Yield Strength (Mpa)	97		
Elongation (%)	32		
Reduction in Area (%)	80		
Hardness (HB)	120	25	annealed

Thermal Properties			
Properties		Conditions	
		T (°C)	Treatment
Thermal Expansion (10 ⁻⁶ /°C)	8.6	20-100 more	

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99.5 Ti 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	-

99.5 Ti 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	-

99.5 Ti Ti Alloy Heat Treatment Regime

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

99.5 Ti 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: