

This page is mainly introduced the Ti-5Al-5Sn-2Zr-2Mo-0.25Si 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-5Sn-2Zr-2Mo-0.25Si 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-5Sn-2Zr-2Mo-0.25Si Ti Alloy

Ti-5Al-5Sn-2Zr-2Mo-0.25Si Ti Alloy Standard Number:

ITEM	Standard Number	Descriptions
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Ti-5Al-5Sn-2Zr-2Mo-0.25Si 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	

<b>Category</b>	Titanium Alloy
<b>Class</b>	Wrought
<b>Type</b>	Near alpha alloy
<b>Composition</b>	
<b>Element</b>	<b>Weight %</b>
Al	5
Sn	5
Zr	2

Mo	2
Si	0.25

Mechanical Properties			
Properties		Conditions	
		T (°C)	Treatment
Density ( $\times 1000$ kg/m <sup>3</sup> )	4.51	25	
Poisson's Ratio	0.326	25	
Elastic Modulus (GPa)	113.8	25	
Tensile Strength (Mpa)	1048	25	975°C (0.5 hour), air cool, 595°C (2 hours), air cool
Yield Strength (Mpa)	965		
Elongation (%)	13		
Reduction in Area (%)			

Thermal Properties			
Properties		Conditions	
		T (°C)	Treatment
Thermal Expansion (10 <sup>-6</sup> /°C)	10.3	20-815	

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### Ti-5Al-5Sn-2Zr-2Mo-0.25Si Ti Alloy Physical Properties

Tensile strength	115-234	$\sigma_b$ /MPa
Yield Strength	23	$\sigma_{0.2} \geq$ /MPa
Elongation	65	$\delta_5 \geq$ (%)
$\psi$	-	$\psi \geq$ (%)
Akv	-	$Akv \geq$ /J
HBS	123-321	-
HRC	30	-

### Ti-5Al-5Sn-2Zr-2Mo-0.25Si Ti Alloy Mechanical Properties

Tensile strength	231-231	$\sigma_b$ /MPa
Yield Strength	154	$\sigma_{0.2} \geq$ /MPa
Elongation	56	$\delta_5 \geq$ (%)
$\psi$	-	$\psi \geq$ (%)
Akv	-	$Akv \geq$ /J
HBS	235-268	-
HRC	30	-

### Ti-5Al-5Sn-2Zr-2Mo-0.25Si Ti Alloy Heat Treatment Regime

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

## Ti-5Al-5Sn-2Zr-2Mo-0.25Si 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:**