

This page is mainly introduced the **Ti-11.5Mo-6Zr-4.5Sn 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-11.5Mo-6Zr-4.5Sn 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-11.5Mo-6Zr-4.5Sn Ti Alloy

Ti-11.5Mo-6Zr-4.5Sn Ti Alloy Standard Number:

ITEM	Standard Number	Descriptions
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Ti-11.5Mo-6Zr-4.5Sn 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	

<b>Category</b>	Titanium Alloy
<b>Class</b>	Wrought
<b>Type</b>	Beta alloy
<b>Designations</b>	<b>United States:</b> MIL-T-9047, AMS 4977, AMS 4980
<b>Composition</b>	
<b>Element</b>	<b>Weight %</b>
Mo	11.5

Zr	6
Sn	4.5

<b>Mechanical Properties</b>			
<b>Properties</b>		<b>Conditions</b>	
		<b>T (°C)</b>	<b>Treatment</b>
<b>Density</b> (×1000 kg/m <sup>3</sup> )	4.51	25	
<b>Poisson's Ratio</b>	0.33	25	
<b>Elastic Modulus</b> (GPa)	103.4	25	
<b>Tensile Strength</b> (Mpa)	1386	25	solution+age
<b>Yield Strength</b> (Mpa)	1317		
<b>Elongation</b> (%)	11		
<b>Reduction in Area</b> (%)			

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### Ti-11.5Mo-6Zr-4.5Sn 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-11.5Mo-6Zr-4.5Sn 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-11.5Mo-6Zr-4.5Sn Ti Alloy Heat Treatment Regime

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

### Ti-11.5Mo-6Zr-4.5Sn 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	$\Phi$ 8-1200mm*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

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