

This page is mainly introduced the Ti-5Al-2.5Sn-ELI (low O2) 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-ELI (low O2) 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-ELI (low O2) Ti Alloy

Ti-5Al-2.5Sn-ELI (low O2) Ti Alloy Standard Number:

ITEM	Standard Number	Descriptions
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Ti-5Al-2.5Sn-ELI (low O2) 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: MIL-T-9046, MIL-T-9047, AMS 4924, AMS 4909
Composition	
Element	Weight %
Al	5

Sn	2.5
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Mechanical Properties			
Properties		Conditions	
		T (°C)	Treatment
Density (×1000 kg/m ³)	4.48	25	
Poisson's Ratio	0.33	25	
Elastic Modulus (GPa)	110.3	25	
Tensile Strength (Mpa)	807	25 more	annealed
Yield Strength (Mpa)	745		
Elongation (%)	16		
Reduction in Area (%)			
Hardness (HRC)	35	25	annealed
Impact Strength (J) (<i>Charpy</i>)	27	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-ELI (low O2) Ti Alloy Physical Properties		
Tensile strength	115-234	σ _b /MPa
Yield Strength	23	σ _{0.2} ≥/MPa
Elongation	65	δ ₅ ≥ (%)
ψ	-	ψ ≥ (%)
Akv	-	Akv ≥/J
HBS	123-321	-
HRC	30	-

Ti-5Al-2.5Sn-ELI (low O2) Ti Alloy Mechanical Properties		
Tensile strength	231-231	σ _b /MPa
Yield Strength	154	σ _{0.2} ≥/MPa
Elongation	56	δ ₅ ≥ (%)
ψ	-	ψ ≥ (%)
Akv	-	Akv ≥/J
HBS	235-268	-
HRC	30	-

Ti-5Al-2.5Sn-ELI (low O2) Ti Alloy Heat Treatment Regime				
Annealing	Quenching	Tempering	Normalizing	Q & T
√	√	√	√	√

Ti-5Al-2.5Sn-ELI (low O2) 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: