

This page is mainly introduced the Ti-8Mn 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-8Mn 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-8Mn Ti Alloy

Ti-8Mn Ti Alloy Standard Number:

ITEM	Standard Number	Descriptions
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Ti-8Mn 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	

Ti-8Mn Ti Alloy

Our advantages

Ti-8Mn properties and heat treatment forged piece, Including Ti-8Mn application and specifications, We have all specifications including Ti-8Mn steel plate, Ti-8Mn sheet, Ti-8Mn square steel, Ti-8Mn flat bar, Ti-8Mn round bar, Ti-8Mn forgings, we can own production and sales.

Introduction to Our Products:

Specialized high quality steel

We have the advantages of equipment, technologies and price

forged/hot rolling/ extrusion of steel

We can produce the Ti-8Mn has the following specifications:

Round bar steel: 1mm to 3000mm

Square-shape steel: 1mm to 2000mm

Plate steel: 0.1mm to 2500mm

Width: 10mm to 2500mm

Lenth: We can supply any lenth based on the customer's requirement.

Forging: Shafts with flanks/pipes/tubes/slugs/donuts/cubes/other shapes

Tubings: OD: ϕ 6-219 mm, with wall thickness ranging from 1-35 mm.

Finished goods condition: hot forging/hot rolling + annealing/normalizing + tempering/quenching + tempering/any conditions based on the customer's requirement

Surface conditions: scaled (hot working finish)/ground/rough machining/fine machining/based on the customer's requirement

Furnaces for metallurgical processing: electrode arc + LF/VD/VOD/ESR/Vacuum consumable electrode.

Ultrasonic inspection: 100% ultrasonic inspection for any imperfections or based on the customer's requirement
Excellent service for all kinds of industries, with advantages of technologies, equipment and price.

We serve you with our honesty, integrity, and professionalism.

Chemical composition % of the ladle analysis of grade Ti-8Mn and Standards

Category	Titanium Alloy
Class	Wrought
Type	Alpha-beta alloy
Designations	United States: MIL-T-9046, AMS 4908
Composition	

Element	Weight %
Mn	8

Mechanical Properties			
Properties		Conditions	
		T (°C)	Treatment
Density ($\times 1000$ kg/m ³)	4.73	25	
Poisson's Ratio	0.33	25	
Elastic Modulus (GPa)	113.1	25	
Tensile Strength (Mpa)	945	25	annealed
Yield Strength (Mpa)	862		
Elongation (%)	15		
Reduction in Area (%)	32		

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

Machining performance

Download Ti-8Mn the mechanical properties of the report, the report provides detailed performance analysis and application.

Principal Design Features

One of the most widely used precipitation hardening grades in the business. While soft and ductile in the solution annealed condition, it is capable of high properties with a single precipitation or aging treatment. Characterized by good corrosion resistance, high hardness, toughness and strength.

Machinability

Long, gummy chips characterize this alloys machinability. It can be machined in the annealed condition, however condition H1150M will yield best results. Post machining solution treatment of parts will be required prior to final hardening if machining in this condition.

Heat Treatment

CONDITION A--Soak at 1900 F (1038 C) for 30 minutes and cool below 60 F (16 C) for complete martensite transformation. CONDITION H 950- Treat Condition A material at 900 F(482 C) for 1 hour, air cool..
CONDITION H925, H1025, H1075, H1100, H1150- Soak solution treated material for 4 hours at specified temperature, air cool, CONDITION H1150M- Soak solution treated material at 1400 F (760 C) for 2 hours, air cool, then re-heat to 1150 F (620 C) for 4 hours and air cool.

Welding

Successfully welded by common fusion and resistance methods, this alloy should not be joined by oxyacetylene welding. AWS E/ER630 filler metal is recommended if required.

Forging

Soak for 1 hour at 2150 F (1177 C) prior to forging. Do not work below 1850 F (1010 C). Post-work solution treatment is required prior to final hardening.

Ti-8Mn 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-8Mn 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-8Mn Ti Alloy Heat Treatment Regime				
Annealing	Quenching	Tempering	Normalizing	Q & T
√	√	√	√	√

Ti-8Mn 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:

