

This page is mainly introduced the ASTM A437 B4B Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of ASTM A437 B4B, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.

Datasheet for Steel Grades Special Steel ASTM A437 B4B

ASTM A437 B4B Standard Number:

ITEM	Standard Number	Descriptions
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ASTM A437 B4B Chemical composition (mass fraction) (wt.%)

Chemical			Min.(%)				Max.(%)		
C	Si	Mn	P	S	Cr	Ni	Mo	V	Ta
0.20-0.25	0.20-0.50	0.50-1.00	≤0.025	≤0.025	11.0-12.5	0.50-1.00	0.90-1.25	0.20-0.30	
W	N	Cu	Co	Pb	B	Nb	Al	Ti	Other
0.90-1.25							≤0.05	≤0.05	Tin: ≤0.04

Standard Specification for Stainless and Alloy-Steel Turbine-Type Bolting Specially Heat Treated for High-Temperature Service¹

ASTM A437 B4B 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	-

ASTM A437 B4B Mechanical Properties

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

ASTM A437 B4B Heat Treatment Regime

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

ASTM A437 B4B 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

We can produce Special Steel the specifications follows: