

This page is mainly introduced the **AISI 501 Datasheet**, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of **AISI 501**, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.

## Datasheet for Steel Grades Specialsteel AISI 501

AISI 501 Standard Number:		
ITEM	Standard Number	Descriptions
1	A 194/A 194M (2014)	Carbon and Alloy Steel Nuts for Bolts for High Pressure or High Temperature Service, or Both
2	A 314 (2013)	Stainless Steel Billets and Bars for Forging

AISI 501 Chemical composition(mass fraction)(wt.%)									
Chemical		Min.(%)				Max.(%)			
C						0.15			
Mn		0.30				0.60			
Si						0.50			
P						0.030			
S						0.50			
Cr		4.00				6.00			
Mo		0.45				0.65			
C	Si	Mn	P	S	Cr	Ni	Mo	V	Ta
W	N	Cu	Co	Pb	B	Nb	Al	Ti	Other

Material designation:	501
Standard:	AISI
Country:	USA
Steel Group:	Structural and constructional steels
Subgroup:	A 194/A 194M (2014) Carbon and Alloy Steel Nuts for Bolts for High Pressure or High Temperature Service, or Both

Material designation:	501
Comment:	Ferritic steel

### AISI 501 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	-

### AISI 501 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	-

### AISI 501 Heat Treatment Regime

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

### AISI 501 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

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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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**We can produce Specialsteel the specifications follows:**