

**This page is mainly introduced the 331S42 Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of 331S42, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.**

## Datasheet for Steel Grades Specialsteel 331S42

331S42 Standard Number:		
ITEM	Standard Number	Descriptions
1	BS 970-4	Specification for wrought steels for mechanical and allied engineering purposes. Valve steels

331S42 Chemical composition(mass fraction)(wt.%)									
Chemical		Min.(%)			Max.(%)				
C		0.37			0.47				
Si		1.00			2.00				
Mn		0.50			1.00				
P					0.040				
S					0.030				
Cr		13.00			15.00				
Ni		13.00			15.00				
Mo		0.40			0.70				
W		2.20			3.00				
C	Si	Mn	P	S	Cr	Ni	Mo	V	Ta
W	N	Cu	Co	Pb	B	Nb	Al	Ti	Other

Specification for wrought steels for mechanical and allied engineering purposes. Valve steels

### 331S42 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	-

### 331S42 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	-

### 331S42 Heat Treatment Regime

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

### 331S42 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,	$\Phi 8$ -1200mm*L	Forging, hot rolling and	Black, Rough Turning,

	Square Bar		cold rolling, Cast	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 Specialsteel the specifications follows:**