

This page is mainly introduced the **FV 520B Datasheet**, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of **FV 520B**, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.

Datasheet for Steel Grades Specialsteel FV 520B

FV 520B Standard Number:

ITEM	Standard Number	Descriptions
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FV 520B Chemical composition (mass fraction) (wt.%)

Chemical	Min.(%)	Max.(%)							
C		0.07							
Si		0.70							
Mn		1.00							
P		0.035							
S		0.025							
Cr	13.0	15.0							
Ni	5.00	6.50							
Mo	1.20	2.00							
Cu	1.20	2.00							
Nb	0.20	0.70							
C	Si	Mn	P	S	Cr	Ni	Mo	V	Ta
W	N	Cu	Co	Pb	B	Nb	Al	Ti	Other

1050 °C solid solution treatment + 850 °C intermediate + 470 °C ageing
FV520B steel strength reached the maximum when = FV520B

FV520B has excellent mechanical performance at low temperature, under high temperature tempering has good tensile properties at low temperature. When the temperature of the cooling liquid nitrogen is still keep the room temperature mechanical properties. This is why? Because

FV520B austenitic steel has the inverter performance. Low temperature deformation, austenite into martensite, intensity is greatly raised. Different inverter of austenite, the strength is different also.

FV 520B 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	-

FV 520B 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	-

FV 520B Heat Treatment Regime

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

FV 520B 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 Specialsteel the specifications follows: