

JISG4051 S50C steel plate high carbon steel

S50C steel plate, JISG4051 S50C steel plate, under JISG4051 standard, we can regard S50C steel plate as high carbon steel.

S50C steel plate is one mainly of high carbon steel, for the high strength medium carbon steel, the cold-work plasticity is low, the welding performance, the hardenability are bad, but non-temper brittleness, cutting value still permissible. Generally under the normalizing or quenching, the tempering uses, uses in making the resistance to wear to request high, moves the load and the stock effect not big mechanical job and the spring like forges the gear, the tension bar, the roller, the axis, the agriculture use to excavate the plough-share, the heavy load spindle and so on.

The equivalent standards of S50C steel

		Comparision of steel grades	
S50C JIS G 4051	DIN	1C50	
	AISI	1050	
	UNI 7846	-	
	BS 970	-	
	UNE 36011	-	
	SAE J 403-AISI	-	

Chemical Composition of S50C steel

Grade	C	Si	Mn	P(%) max	S(%) max	Cr(%) max	Ni(%) max	Cu(%) max
S50C	0.47-0.55	0.17-0.37	0.50-0.80	0.035	0.035	0.25	0.25	0.25

Mechanical Properties of S50C steel

Tensile Strength σ_b (MPa)	Yield Strength σ_s (MPa)	Elon-Gation Ration $\dot{\ell}'5$ (%)	Reducti on of area Psi(%)	Impact merit AKV (J)	Resilient value AKV(J/c m ²)	Degree of hardnes s	Annealed steel	Test Specimen Size (mm)
≥630	≥375	≥14	≥40	≥31	≥39	≤241HB	≤207HB	25

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Tel:0086-371-86151527

E-mail:bb@bebonchina.com

Fax: 0086-371-86011881

MSN:bebонchina@hotmail.com

Skype: bebonchina

Web:<http://www.shipbuilding-steel.com>

Oficina Dir: 2801 B# International enterprise center Zhengzhou city in China.

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Tel:0086-371-86151527

E-mail:bb@bebonchina.com

Fax: 0086-371-86011881

MSN:bebonchina@hotmail.com

Skype: [bebonchina](#)

Web:<http://www.shipbuilding-steel.com>

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