6CrW2Si Tool Steel

a steel grade formed by adding a certain amount of tungsten on the basis of chromium silicon steel.

Because tungsten helps to preserve the finer grains during quenching, and obtains higher toughness in the tempered state. 6CrW2Si steel has higher quenching hardness and certain high temperature strength of 4CrW2Si steel and 5CrW2Si steel. Usually used to manufacture tools that bear impact loads and require high wear resistance, such as pneumatic tools, chisels and stamping dies, cold shear blades, die for punching edges, tools for air hammers, etc.

6CrW2Si steel chemical composition GB / T1299-2000) w /%:

C	Si	Mn	Cr	W	P	S
0.55~0.65	0.50~0.80	≤0.40	1.00~1.30	2.00~2.70	≤0.030	≤0.030

Equivalent Grade:

EU EN	USA -	Germany DIN,WNr	France AFNOR	China GB	Russia GOST	Inter ISO
60WCrV8 (1.2550)	S1	60WCrV7	55WC20	6CrW2Si	5KHV2S	60WCrV8

Equivalent composition

Grade	C	Cr	W	Si	Mn	V	P	S	Ni	Cu
							≤			
6CrW2Si	0.55-0.65	1.00-1.30	2.20-2.70	0.50-0.80	≤0.40	__	0.030	0.030	—	0.30
SKS4	045-0.55	0.50-1.00	0.50-1.00	≤0.35	≤0.35	__	0.030	0.030	0.25	0.25
S1	0.40-0.55	1.00-1.80	1.50-3.00	0.15-1.20	0.10-0.40	0.10-0.30	0.030	0.030	0.75	
1.2550	0.55-0.65	0.90-1.20	1.70-2.20	0.70-1.00	0.15-0.45	0.10-0.20	0.030	0.030	—	—

6CrW2Si Mechanical Properties		
Tensile strength	160～467	σb/MPa
Yield Strength	900	σ 0.2 ≥/MPa
Elongation	16	δ5≥(%)
HBS	507～422	–
HRC	30	–

Heat Treatment

Quenching the sample 860 ~ 900 ℃. oil cooling.

Features

6CrW2Si steel has higher quenching hardness and high-temperature strength than 4CrW2Si steel and 5CrW2Si steel. It is usually used to manufacture tools that withstand impact loads and require high wear resistance.

Application

Used to make scissors and slicing punches.
Die, die, casting finishing tool, pneumatic chisel used for working under heavy load.
As a hot processing steel. It can produce screws and hot riveting punches.
High temperature die-cast light alloy head.