Cr12Mo1V1

Steel: 1.2379

Corresponding Steel

Grade and Chemical Composition

Chemical Composition(%)

Standard/Steel Grade		C	Si	Mn	Cr	Mo	V	Co
GB	Cr12Mo1V1	1.40 ~ 1.60	≤ 0.60	≤ 0.60	11.00 ~ 13.00	0.70 ~ 1.20	0.50~ 1.10	≤ 1.00
AISI	D2	1.40 ~ 1.60	0.10~ 0.60	0.10~ 0.60	11.00 ~ 13.00	0.70 ~ 1.20	0.50~ 1.10	
DIN	1.2379	1.45 ~ 1.60	0.10~ 0.60	0.20~ 0.60	11.00 ~ 13.00	0.70 ~ 1.00	0.70~ 1.00	
JIS	SKD11	1.40 ~ 1.60	≤ 0.40	≤ 0.60	11.00 ~ 13.00	0.80 ~ 1.20	0.20~0.50	

Brief Introduction: D2 is a versatile high-carbon, high-chromium, air-hardening tool steel that is characterized by a relatively high attainable hardness and numerous, large, chromiumrich alloy carbides in the microstructure. These carbides provide good resistance to wear from sliding contact with other metals and abrasive materials. Although other steels with improved toughness or improved wear resistance are available, D2 provides an effective combination of wear resistance and toughness, tool performance, price, and a wide variety of product forms.Widely application including rolls, punches, dies for blanking,forming, trimming, and thread rolling, shear knives, food-processing knives, and gages.Application for easy cuttings, shaft knives, circular saw, stamping dies, rolls, punches, milling tool, molds for plastic materials, etc.

Shape & Dimension: Forged Products:
Round: 60mm-400mm Flat: 40-240mm*100-610mm

Rolled Products:
Round: 8mm-50mm Flat: 12-60mm*205-610mm

Delivery Condition: Forged / Rolled, Annealed, Turned/Milled

Note:

9CrWMn

Steel: 9CrWMn

Corresponding Steel Grade and Chemical Composition

Chemical Composition(%)

Standard/Steel Grade		C	Si	Mn	Cr	W	Nb	V
GB	9CrWMn	0.85 ~ 0.95	≤ 0.40	0.90 ~ 1.20	0.50 ~ 0.80	0.50 ~ 0.80	0.20 ~ 0.35	
AISI	O1	0.85 ~ 1.00	0.10~0.50	1.00~1.40	0.40~0.70	0.40~0.60		≤0.30
DIN	95MnWCr5	0.90 ~ 1.00	0.10 ~ 0.40	1.05 ~ 1.35	0.40 ~ 0.65	0.40 ~ 0.70		0.05 ~ 0.20
JIS	SKS3	0.90~1.00	≤ 0.35	0.90 ~ 1.20	0.50 ~ 1.00	0.50 ~ 1.00		

Brief Introduction:

9CrWMn (AISI O1) is a low alloy cold work steel. Has certain hardenability and abrasion resistance, less deformation during quenching, even carbonization and small grain. 9CrWMn is a general-purpose tool steel that is typically used in applications where alloy steels cannot provide sufficient hardness, strength, and wear resistance.T7 steel, classified as the sub-eutectoid steel, has a highly strength and toughness after quenching and tempering , and there is a certain degree of hardness, but the low hot-hardness, poor hardenability and distortion after quenching. It's normally used for cold-punching mould with small section &complicated shape, also different gauges and measures. Commonly used to manufacture tools which can withstand vibration and impact where toughness is prime importance and where the good machinability is less need, such as chisels, punch, small size wood-tool, woodworking with saws and chisels, simple bakelite mold, forging mold, scissors, hand-hammer and sickles, etc.

Shape & Dimension:

Delivery Condition:

Note:

9Mn2V

Steel: 1.2842

Corresponding Steel Grade and Chemical Composition

Chemical Composition(%)

Standard/Steel Grade		C	Si	Mn	V	Co	Cr	Mo
GB	9Mn2V	0.85 ~ 0.95	≤ 0.40	1.70 ~ 2.00	0.10 ~ 0.25	≤1.00		
AISI	O2	0.85 ~ 0.95	≤ 0.50	1.40～1.80	≤0.3		≤0.50	≤0.30
DIN	1.2842	0.85 ~ 0.95	0.10~0.40	1.80~2.20	0.05~0.20		0.20~0.50	
JIS	-							

Brief Introduction: Better than the general mechanical properties of low-alloy tool. It appeared highly hardness and wear resistance, good hardenability and little deformation after hardening.Suitable for product small-scale cold-working die, particularly the various requirements for small deformation, high-precision measuring tools (such as the model, block gauge, gauge, etc.) as well as precision screws, grinding spindle and so on.

Shape & Dimension:

Forged:

Roun：60mm-360mm；Flat：30-240mm*150-510mm

Rolled:

Round：8mm-50mm；Flat：12-60mm*205-610mm

Delivery Condition: Forged/Rolled, Annealed, Turned/Milled

Note:

W								
Steel:	W							
Corresponding Steel			Chemical Composition(%)					
Grade and Chemical	Standard/Steel Grade		C	Si	Mn	Cr	W	V
Composition	GB	W	1.05 ~ 1.25	≤ 0.40	≤ 0.40	0.10 ~ 0.30	0.80 ~ 1.20	
	AISI	F1	0.95~1.25	0.10~0.50	≤ 0.50		1.00~1.75	
	DIN	-						
	JIS	SKS21	1.00~1.10	≤ 0.35	≤ 0.50	0.20~0.50	0.50~1.00	0.10~0.25
Brief Introduction:	Alloy cutting tool steel, commonly used in shock-resistant tool steel. This steel has high hardness and good wear resistance.1.It is mainly used to produce cutting tools and impact ressistance tools. 2.Some for cold-working tools. For example:measuring tools, reamer, cutting tools, twist drill, tap and so on.							
Shape & Dimension:								
Delivery Condition:								
Note:								

CrWMn										
Steel:	CrWMn									
Corresponding Steel Grade and Chemical Composition			Chemical Composition(%)							
	Standard/Steel Grade		C	Si	Mn	Cr	Mo	W	P	S
Composition	GB	CrWMn	0.90 ~ 1.05	≤ 0.40	0.80 ~ 1.10	0.90 ~ 1.20	1.20~ 1.60	1.20~1.60	≤ 0.030	≤ 0.030
	AISI	-								
	DIN	-								
	JIS	SKS31	0.90 ~ 1.05	≤0.35	0.90 ~ 1.20	0.80 ~ 1.20		1.00~1.50	≤ 0.030	≤ 0.030
Brief Introduction:	It is widely used for cold-working tools, knowing as "non-deformable steel", but sensitive to the formation of network carbide.A widely use in cold-working tool steel. Including measuring die, like die block, gage block,columns and sample sets, as well as high-precision punch die with complex shape.									
Shape & Dimension:										
Delivery Condition:										
Note:										

5CrW2Si

Steel: 5CrW2Si

Corresponding Steel Grade and Chemical Composition

Chemical Composition(%)

Standard/Steel Grade		C	Si	Mn	Cr	W	V	Mo
GB	5CrW2Si	0.45 ~ 0.55	0.50 ~ 0.80	≤ 0.40	1.00 ~ 1.30	2.00 ~ 2.50		
AISI	S1	0.40 ~ 0.55	0.15~1.20	0.10~0.40	1.00 ~ 1.80	1.50~3.00	0.15 ~ 0.30	≤ 0.50
DIN	50WCrV8	0.45 ~ 0.55	0.70~1.00	0.15~0.45	0.90~1.20	1.70~2.20	0.10 ~ 0.20	
JIS	-							

Brief Introduction: It is a medium-carbon steel which combines moderate hardness with good impact toughness. It is a deep-hardening, oil-hardening steel designed for shock and impact loading applications.Typical applications include hand chisels, pneumatic tools, shear blades, mandrels, heavy- duty punches, stamping dies, and machine parts.

Shape & Dimension:

Delivery Condition:

Note:

Cr2								
Steel:	Cr2							
Corresponding Steel Grade and Chemical Composition	Chemical Composition(%)							
	Standard/Steel Grade		C	Si	Mn	Cr	Co	V
	GB	Cr2	0.95 ~ 1.10	≤ 0.40	≤ 0.40	1.30 ~ 1.65	≤ 1.00	
	AISI	L3	0.95 ~ 1.10	0.10~0.50	0.25~0.80	1.30 ~ 1.70		0.10~0.30
	DIN	102Cr6	0.95 ~ 1.10	0.15~0.35	0.25~0.45	1.35~1.65		
	JIS	SUJ2	0.95 ~ 1.10	0.15~0.35	≤ 0.50	1.30 ~ 1.60		
Brief Introduction:	It is a low-carbon, typical chromium measuring and cutting tool steel.It is also a water-hardening and oil-harding tool steel that is characterized by excellent tool performance and excellent dimensional stability in heat treatment.Its hardenability, hardness and wear resistace is higher than that of carbon tool steel.Typical applications includemeasuring tools, such as templates, card board, sample sets of gauge block gauge, ring gauge, thread plug gauge and sample columns, etc. It can also be used to make wire drawing dies and molds for cold-working die cold upsetting, as well as to cut materials that are not hard with low speed.							
Shape & Delivery Condition:								
Note:								

Cr12								
Steel:	1.208							
Corresponding Steel Grade and Chemical Composition	Chemical Composition(%)							
	Standard/Steel Grade		C	Si	Mn	Cr	V	W
	GB	Cr12	2.00 ~ 2.30	≤ 0.40	≤ 0.40	11.50 ~ 13.00		
	AISI	D3	2.00 ~ 2.35	0.10~0.60	0.10~0.60	11.00 ~ 13.50	≤ 1.00	≤ 1.00
	DIN	1.208	1.90~2.20	0.10~0.60	0.20~0.60	11.00 ~ 13.00		
	JIS	SKD1	1.90~2.20	0.10~0.60	0.20~0.60	11.00 ~ 13.00		
Brief Introduction:	It is a high-carbon, high-chromium, oil-hardening tool steel that is characterized by a relatively high attainable hardness and numerous, large, chromium-rich alloy carbides in the microstructure. These carbides provide good resistance to wear from sliding contact with other metals and abrasive materials. Widely application including forming rolls, drawing dies, forming, powder compaction tooling, and lamination dies.							
Shape & Dimension:	Forged: Round：60mm-360mm；Flat：30-240mm*150-510mm Rolled: Round：8mm-50mm；Flat：12-60mm*205-610mm							
Delivery Condition:	Forged/Rolled, Annealed, Turned/Milled							
Note:								

Cr5Mo1V								
Steel:	A2							
Corresponding Steel Grade and Chemical Composition			Chemical Composition(%)					
	Standard/Steel Grade		C	Si	Mn	Mo	Cr	V
	GB	Cr5Mo1V	0.95 ~ 1.05	≤ 0.50	≤ 1.00	0.90 ~ 1.40	4.75 ~ 5.50	0.15 ~ 0.50
	AISI	A2	0.95 ~ 1.05	0.10~ 0.50	0.40~ 1.00	0.90 ~ 1.40	4.75 ~ 5.50	0.15 ~ 0.50
	DIN	1.2363	0.95 ~ 1.05	0.10~0.40	0.40~0.80	0.90 ~ 1.20	4.80 ~ 5.50	0.15 ~ 0.35
	JIS	SKD12	0.95 ~ 1.05	0.10~0.40	0.40~0.80	0.90 ~ 1.20	4.80~5.50	0.15 ~ 0.35
Brief Introduction:	It is a versatile, air-hardening tool steel that is characterized by good toughness and excellent dimensional stability in heat treatment.It provides an effective combination of strength and toughness, tool performance, price, and a wide variety of product forms.Widely application including punches and dies, chuck jaws, cutting tools for woodworking, tooling for plastic injection, dowel pins, hammers, industrial knives,and gages.							
Shape & Dimension:	Round：60mm-360mm；Flat：30-240mm*150-510mm							
Delivery Condition:	Forged, Annealed, Turned/Milled							
Note:								

Cr12Mo1V1

Steel: 1.2379

Corresponding Steel

Grade and Chemical Composition

Chemical Composition(%)

Standard/Steel Grade		C	Si	Mn	Cr	Mo	V	Co
GB	Cr12Mo1V1	1.40 ~ 1.60	≤ 0.60	≤ 0.60	11.00 ~ 13.00	0.70 ~ 1.20	0.50~ 1.10	≤ 1.00
AISI	D2	1.40 ~ 1.60	0.10~ 0.60	0.10~ 0.60	11.00 ~ 13.00	0.70 ~ 1.20	0.50~ 1.10	
DIN	1.2379	1.45 ~ 1.60	0.10~ 0.60	0.20~ 0.60	11.00 ~ 13.00	0.70 ~ 1.00	0.70~ 1.00	
JIS	SKD11	1.40 ~ 1.60	≤ 0.40	≤ 0.60	11.00 ~ 13.00	0.80 ~ 1.20	0.20~0.50	

Brief Introduction: D2 is a versatile high-carbon, high-chromium, air-hardening tool steel that is characterized by a relatively high attainable hardness and numerous, large, chromiumrich alloy carbides in the microstructure. These carbides provide good resistance to wear from sliding contact with other metals and abrasive materials. Although other steels with improved toughness or improved wear resistance are available, D2 provides an effective combination of wear resistance and toughness, tool performance, price, and a wide variety of product forms.Widely application including rolls, punches, dies for blanking,forming, trimming, and thread rolling, shear knives, food-processing knives, and gages.Application for easy cuttings, shaft knives, circular saw, stamping dies, rolls, punches, milling tool, molds for plastic materials, etc.

Shape & Dimension: Forged Products:
Round: 60mm-400mm Flat: 40-240mm*100-610mm

Rolled Products:
Round: 8mm-50mm Flat: 12-60mm*205-610mm

Delivery Condition: Forged / Rolled, Annealed, Turned/Milled

Note:

Steel:	1.2436						
Corresponding Steel Grade and Chemical Composition:			Chemical Composition(%)				
	Standard/Steel Grade		C	Si	Mn	Cr	W
	DIN EN ISO 4957	1.2436(X210 CrW12)	1.90~2.20	0.10~0.60	0.20~0.60	11.00~13.00	0.60~0.80
Brief Introduction:	Ledeburitic 12% chrome steel ,excellent wear resistance due to the high volume of hard carbides in the steel matrix, high surface hardness after heat treatment, medium toughness, dimensionally stable, high compressive strength, similar to AISI D6. Application: Cutting tools for high wear resistance, rolls with high dimensional stability, tool for wire bar and tube production, cold shear blades for thin sheets.						
Shape & Dimension:	Forged Products: Round: 60mm-360mm Flat: 30-240mm*150-510mm Rolled Products: Round: 8mm-50mm Flat: 12-60mm*205-610mm						
Delivery Condition:	Forged / Rolled, Annealed, Turned/Milled						
Note:							