KNIFE COUNTRY USA

Steel Composition Chart

Types of Steel	Carbon C	Cobalt Co	Copper Cu	Chromium Cr	Manganese Mn	Molybdenum Mo	Nickel N	Phosphorus P	Selenium Se	Silicon Si	Sulfur S	Tungsten W	Vanadium V
440-A	0.45-0.75			16-18	1.00 max	0.75 max		0.04 max	0.75 max	1	0.03 max		
440-B	0.75-0.95			16-18	1.00 max	0.75 max		0.04	0.75 max	1	0.03 max		
440-C	0.95-1.20			18	1.00 max	1.00 max		0.04	0.75 max		0.03 max		
440-F	0.95-1.20			18	1.00 max	1.00 max		0.04		0.4	0.05 min		
440-F-SE	0.95-1.20			18	1.00 max	1.00 max		0.04	0.75 max	0.1	0.03 max		
440-XH	1.6			16	0.5	0.8	0.35		0.75 max	0.4			0.45
ATS-34	1.03			13.74	0.41	3.56		0.026		0.25	0.001		
ATS-55	1	0.4	0.2	14	0.5	0.06		0.03		0.35	0.002		
AUS-4	0.4-0.45			13-14.5	1		0.49	1		0.04	0.03		
AUS-6	0.55-0.65			13-14.5	1		0.49	1		0.04	0.03		0.10-0.25
AUS-8	0.7-0.75			13-14.5	0.5	0.1-0.3	0.49	1		0.04	0.03		0.1-0.26
AUS-10	0.95-1.1			13-14.5	0.5	0.1-0.31	0.49	1		0.04	0.03		0.1-0.27
154-CM	1.05	0.4	0.2	14	0.5	4		0.03		0.35	0.002		
CPM-3V	0.8			5.23	0.5	1.3				0.9			9.75
CPM-10V	2.46			7.5		1.3							2.754
CPM-S30V	1.45			14	0.4	2							4
CPM-S60V	2.3			14		1							9
CPM-S90V	2.15			17	0.4	0.4							5.5
D-2	1.55			11.5	0.35	0.8				0.45			0.9
GIN-1	0.9			15.5	0.6	0.3		0.02		0.37	0.03		
W1	0.7-1.5			0.15	0.1-0.4	0.1	0.2			0.1-0.4		0.5	0.1
W2	0.85-1.5			0.15	0.1-0.4	0.1	0.2			0.1-0.4		0.15	0.15-0.35

All numbers listed above are the percentages (%) of a given alloy in a

CARBON (C) increases edge retention, raises tensile strength, increases hardness and improves resistance to wear and abrasion.
CHROMIUM (Cr) increases hardness, tensile strength and toughness. Provides resistance to wear and corrosion.
COBALT (Co) increases strength and hardness and permits quenching in higher temperatures.
MANGANESE (Mn) increases harden ability, wear resistance and tensile strength.
MOLYBDENUM (Mo) increases strength, hardness, harden ability and toughness.
NICKEL (Ni) adds strength, hardness and corrosion resistance.
PHOSPHORUS (P) improves strength, machinability and hardiness. Creates brittleness in high quantities.
SILICON (Si) increases yield strength, tensile strength and de-oxidizes and de-gasifies to remove oxygen from molten metal.
SULFUR (S) improves machinability when used in minute quantities.
TUNGSTEN (W) adds strength, toughness and hardness.
VANADIUM (V) increases strength, hardness and resistance to shock impact.