GERBER® KNIVES TOOLS GEAR™

FEND FOR YOURSELF®

GERBER
Steel Information

GERBER – Alloy chemical elements and effects

- Carbon is the most important alloy chemical element – the level of carbon decides the hardness of the steel :

- Low	0.05 – 0.15%
- Mild	0.16 – 0.29 %
- Medium	0.3 - 0.59%
- High	0.6 – 1.0%
- Ultra-high	1.0 – 2.0%

- The majority of GERBER knives have a 0.6% Carbon content
- Special knives such as LMF II has a low Carbon content to withstand being used also as a pry bar etc
- The Metolius hunting line has a 0.933% carbon content to hold edge longer

GERBER – Other alloy chemical elements and their effects

- **Chromium (Cr) –** Improves hardness and reduces oxidation
- **Silicon (Si) –** Increases strength
- **Manganese (Mn) –** Hardens low carbon steel
- **Molybdenum (Mo) –** Corrosion, strength and heat resistance
- **Nickel (Ni) –** Reduces oxidation (stain/rust)
- **Phosphorus (P) and Sulphur (S) –** Natural part of steel/iron and is reduced to a low level since it makes the steel material brittle
- **Tungsten (W) –** Improves hardness and cutting efficiency
- **Vanadium (V) –** Increases strength
- **Cobalt (Co) –** Temperature stability, corrosion and strength
- **Nitrogen (N) –** Improves mechanical and corrosion properties

Sources: Wikipedia, Key to metals

GERBER – Steel Characteristics

	Tough		All Purpose		Edge Hold	
USA	420HC/ 425MOD		440A		440C/ 154CM	CPMS30V
China	3Cr13	5Cr15Mov/ 6Cr13	7Cr17Mo/ 4116	8Cr13MoV	9Cr13CoMoV/ 9Cr18	
Europe		12C27	13C26			
Taiwan/Japan		AUS 6A	AUS 8A		AUS10/ ATS34	
Hardness (HRC)	54-56	55-58	57-59	58-60	58-60	59-61

Positives

- Cost
- Flexible without breaking
- Easy to sharpen

Negatives

- Loses edge quicker

Positives

- Holds edge longer
- Strong(hard) blade

Negatives

- Higher cost
- Harder to sharpen
- Stiffer – higher risk to break

GERBER SILVA FISKARS®

GERBER – Steel Comparison Chart

	Tough		All Purpose		Edge Hold
USA	420HC/ 425MOD		440A	440C/ 154CM	CPMS30V
China	3Cr13	5Cr15Mov/ 6Cr13	7Cr17Mo/ 4116	8Cr13MoV	9Cr13CoMoV/ 9Cr18
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Taiwan/Japan		AUS 6A	AUS 8A	AUS10/ ATS34	
Hardness (HRC)	**54-56**	**55-58**	**57-59**	**58-60**	**58-60**	**59-61**
GERBER Knife model	**Gator Gator Fillet Prodigy LMF II E-Z Out Paraframe LST & Ultralight**	**Profile**	**Big Rock Freeman series Obsidian/Ripstop Hinderer CLS AR 3.0 / STL 2.5 Powerframe Void /**		**Metolius Fixed Metolius Folding Metolius 2-blade Metolius Caper Metolius EZ-Open**	**Combat Folder**

GERBER – Steel Composition

Overview

Steel	C Carbon (ave)	C Carbon	Cr Chromium	Co Cobalt	Cu Copper	Mn Manganese	Mo Molybdenum	Ni Nickel	N Nitrogen	P Phosphorus	Si Silicon	S Sulpher	W Tungsten	V Vanadium	Hardness HRc
420	0,15	0,15	12.00-14.00	-	-	1	-	-	-	0,04	1	0,03	-	-	56-60
3Cr13	0,332	0,332	12,55	-	-	0,31	-	0,12	-	0,024	0,54	0,011	-	-	52-55
4Cr13	0,41	0,41	13,02	-	-	0,31	-	0,13	-	0,026	0,41	0,016	-	-	
420 HC	0,44	0,44	12.00-14.00	-	-	0,8	0,6	-	-	0,05	1	0,02	-	0,18	56-60
425 MOD	0,47	0.40-0.54	13.50-15.00	-	-	0,5	0.60-1.00	-	-	0,035	0,8	0,03	-	0,1	56-60
4116	0,5	.45-.55	14.00-15.00	-	-	1 max	0.5-0.8	-	-	0,04	1	0,015	-	.1-.2	56-59
5Cr15MoV	0,56	0,56	15,07	-	-	0,32	0,5	0,14	-	0,028	0,48	0,014	-	0,14	
6Cr13	0,577	0,577	13,04	-	-	0,35	-	0,18	-	0,028	0,51	0,015	-	-	
SANDVIK 12C27	0,6	0,6	13,5	-	-	0,35	-	-	-	0,025	0,01	-	-	-	57-60
5160	0,6	0.56-0.64	0.70-0.90	-	-	0.75-1.00	-	-	-	0,035	0.15-0.30	-	-	-	57-60
AUS6A	0,6	0.55-0.65	13.00-14.50	-	-	1	-	0,49	-	0,04	1	0,03	-	0.10-0.25	57-58
7Cr17Mo	0,635	0,635	16,26	-	-	0,3	0,42	0,17	-	0,027	0,52	0,01	-	-	
440A	0,675	0.60-0.75	16.00-18.00	-	-	1	0,75	-	-	0,04	1	0,03	-	-	57-60
SANDVIK 13C26	0,68	0,68	13	-	-	-	0,7	-	-	0,025	0,4	0,01	-	-	57-60
AUS8A	0,7	0.70-0.75	13.00-14.50	-	-	0,5	0.10-0.30	0,49	-	0,04	1	0,03	-	1.10-0.26	58-59
8Cr13MoV	0,748	0,748	13,14	-	-	0,41	0,14	0,22	-	0,025	0,5	0,01	-	0,11	
CPM 3V	0,8	0,8	7,5	-	-	-	1,3	-	-	-	-	-	-	2,75	58-60
440B	0,85	0.75-0.95	16.00-18.00	-	-	1	0,75	-	-	0,04	1	0,03	-	-	57-59
GIN-1	0,9	0,9	15,5	-	-	0,6	0,3	-	-	0,03	0,37	0,03	-	-	58-60
9Cr18	0,916	0,916	17,25	-	-	0,54	-	0,17	-	0,026	0,56	0,012	-	-	
9Cr13CoMoV	0,933	0,933	13,05	0,24	-	0,25	0,13	0,21	-	0,027	0,3	0,011	-	0,12	
ATS-55	1	1	14	0,4	0,2	0,5	0,6	-	-	0,03	0,4	-	-	-	60-62
VG-10	1	0.95-1.05	14.50-15.50	1.3-1.5	-	0,5	0.90-1.20	-	-	-	0,6	-	-	0.10-0.30	60-62
M-2	1	0.95-1.05	3.75-4.50	-	-	0.15-0.40	4.75-6.50	0,3	-	-	0.20-0.45	-	5.00-6.75	2.25-2.75	60-65
A-2	1	0.95-1.05	4.75-5.50	-	-	1	0.90-1.40	0,3	-	-	0,5	-	-	0.15-0.50	57-62
AUS-10	1,03	0.95-1.10	13.00-14.50	-	-	0,5	0.10-0.31	0,49	-	0,02	1	0,03	-	0.10-0.27	59-60
154CM	1,05	1,05	14	-	-	0,5	4	-	-	-	0,3	-	-	-	59-61
ATS-34	1,05	1,05	14	-	-	0,4	4	-	-	-	0,35	0,02	-	-	59-61
440C	1,08	0.95-1.20	16.00-18.00	-	-	1	0,75	-	-	0,04	1	0,03	-	-	58-60
BG-42	1,15	1,15	14,5	-	-	0,5	4	-	-	-	0,3	-	-	1,2	61-63
S30V	1,45	1,45	14	-	-	-	2	-	0,2	-	-	-	-	4	57-59
D-2	1,5	1.40-1.60	11.00-13.00	-	-	0,6	0.70-1.20	0,3	-	-	0,6	-	-	1,1	57-61
S60V	2,1	2,1	17	-	-	0,4	0,4	-	-	-	0,4	-	-	5,5	55-57
S90V	2,3	2,3	14	-	-	-	1	-	-	-	-	-	-	9	56-58
CPM 10V	2,45	2,45	5,25	-	-	0,5	1,3	-	-	-	0,9	0,07	-	9,75	56-58

GERBER® KNIVES TOOLS GEAR™

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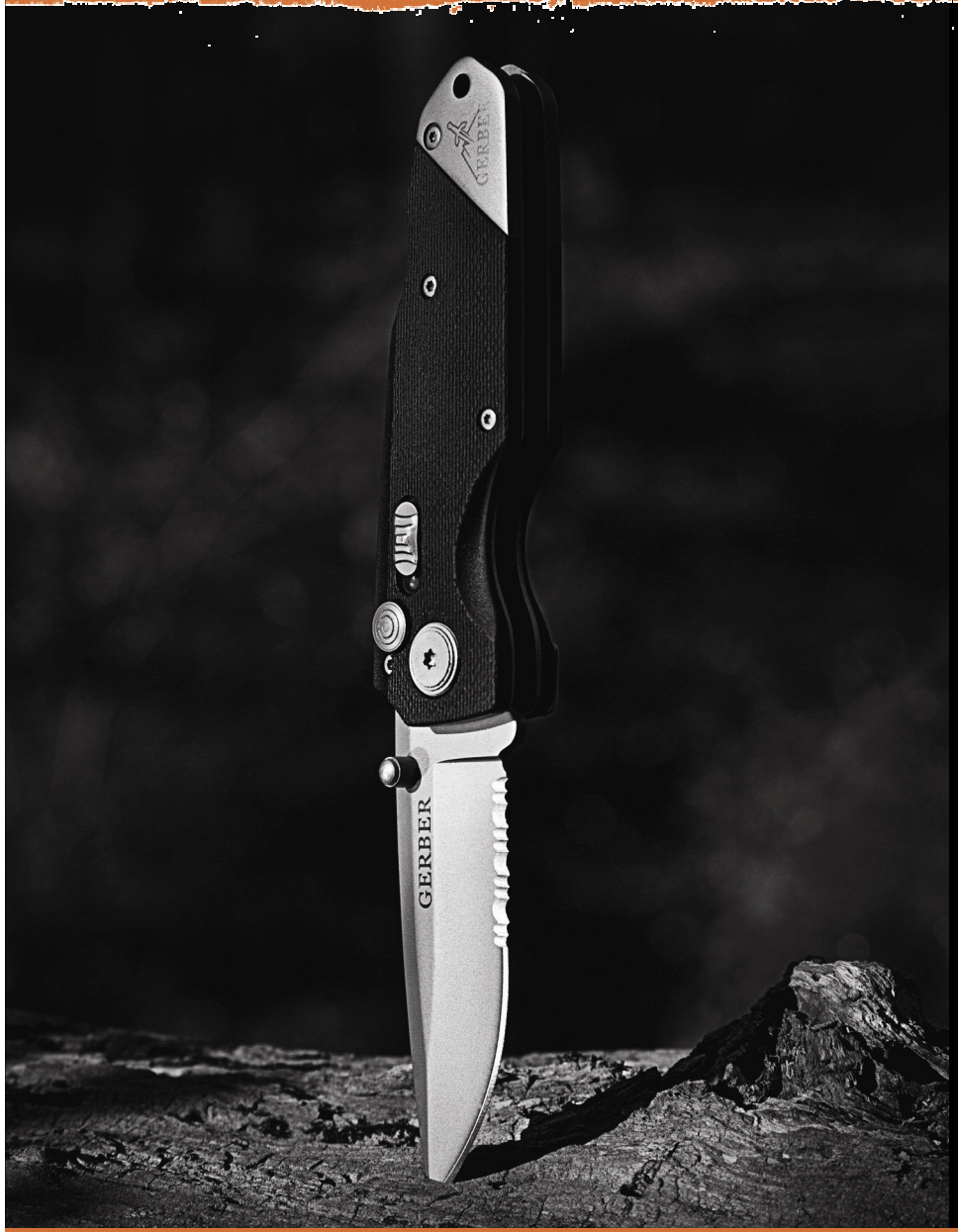

THANK YOU!