

## OIL TEMPERED CHROME SILICON WIRE VALVE SPRING QUALITY

These materials are designed for springs that must withstand considerable shock and extreme heat. Chrome silicon can be used at temperatures up to 50<sup>0</sup> F higher than chrome vanadium. Valve spring quality chrome silicon has been eddy current tested to assure the finest possible surface in keeping with automotive industry requirements. Wire is available in size ranges from .021”-.312”

Chemical Composition Per ASTM-A-877		Dimensional Tolerances	Tolerance (inch)
Carbon	0.51 - 0.59%	0.020 to 0.075, incl	+/- .0008
Manganese	0.50 - 0.80%	Over 0.075 to 0.148, incl	+/- .0010
Phosphorus	0.025 max.	Over 0.148 to 0.375, incl	+/- .0015
Sulfur	0.025 max.		
Silicon	1.20 - 1.60%		
Chromium	0.60 - 0.80%		

Tensile Strength Table ( ASTM-A-877)

Dia. Inch	Tensile Min PSI	Tensile Max PSI	Dia. Inch	Tensile Min PSI	Tensile Max PSI
.020	305,000	330,000	.177	265,000	285,000
.040	300,000	325,000	.200	263,000	283,000
.060	295,000	320,000	.225	260,000	280,000
.080	290,000	310,000	.250	255,000	275,000
.120	280,000	300,000	.312	250,000	270,000
.148	275,000	295,000	.375	245,000	265,000

The above charts are intended to provide general background information. You should also review the appropriate material specification. Please contact Gibbs if you have any questions.