



# HSM Wire International, Inc

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## Hard Drawn - ASTM A 227 Spring Wire

Nominal Composition:	C%	Mn%	
	0.45 - 0.85	0.60 - 1.30	

Applications: Design Engineers use Hard Drawn Spring wire for average stress applications. Lower cost prings and wire forms. Cold Drawn.

## Physical & Mechanical Properties

English Units

Minimum Tensile Strength	CLI 147 - 283 CLII 171 - 324
Design Stress % Minimum Tensile	40
Maximum Operating Temperature	250 °F
Density	.284 lb / cu. in. @68 °F
Rockwell Hardness	C42 - 55
Modulus of Elasticity (Tension)	30 psi x 10 <sup>6</sup>
Modulus of Torsion	11.5 x 10 <sup>6</sup>

Diameter	A227 Class I Hard-Drawn	A227 Class II Hard-Drawn
0.010	310 - 340.000*	~~~~
0.012	305 - 335.000*	~~~~
0.015	295 - 325.000*	~~~~
0.017	290 - 320.000*	~~~~
0.020	283 - 323.000	324 - 364.000
0.023	279 - 319.000	320 - 360.000
0.026	275 - 315.000	316 - 356.000
0.029	271 - 311.000	312 - 352.000
0.032	266 - 306.000	307 - 347.000
0.035	261 - 301.000	302 - 342.000
0.041	255 - 293.000	294 - 332.000
0.048	248 - 286.000	287 - 325.000
0.054	243 - 279.000	280 - 316.000
0.062	237 - 272.000	273 - 308.000
0.072	232 - 266.000	267 - 301.000
0.080	227 - 261.000	262 - 296.000
0.092	220 - 253.000	254 - 287.000
0.106	216 - 248.000	249 - 281.000
0.120	210 - 241.000	242 - 273.000

\* These ranges are covered by HM Wire International derived tensile strengths. Finer sizes available at the customers request.