

SH

Patented drawn spring wire

External standard:

The material conforms with EN 10270 - 1 : 2011

Further equivalent standards:

ASTM A228/A228M JIS G3522

Scope:

Round, patented drawn spring wire according to EN 10270 - 1 : 2011

The wire is used for helical or shaped springs subjected to high static and light dynamic stresses.

The wire can be supplied in a dry drawn or wet drawn finish.

Arrangements as to type of surface (either as above or other possible versions) are made when ordering.

Range of diameters:

0.30 to 6.00 mm

Chemical composition (heat analysis):

C %	Si %	Mn %	P max. %	S max. %	Cu max. %
0.55 - 1.00	0.10 - 0.30	0.50 - 1.00	0.020	0.025	0.12

Raw material:

Wire rod according to in-house specifications.

Mechanical properties:

See table on opposite side.

The cast and helix of the wire meets the requirements of EN 10270 - 1 : 2011

Forms of delivery:

Wires are supplied in the form of coils or on spools.

See the data sheets on forms of delivery.

Please inquire for special tolerances, tensiles, sections, etc.

Mechanical properties: SH - Edition 01/2012 (replaces edition 01/2010)

Nominal diameter mm	Tolerance ¹⁾ mm	Tensile strength ²⁾ MPa	Minimum reduction of area %	Torsion test	Range of tensile strength within the coil MPa
0.30	± 0.008	2660 - 2940	-	-	max. 150
0.32		2640 - 2920			
0.34		2610 - 2890			
0.36		2590 - 2870			
0.38		2570 - 2850			
0.40		2560 - 2830			
0.43		2530 - 2800			
0.45		2510 - 2780			
0.48		2490 - 2760			
0.50		2480 - 2740			
0.53		2460 - 2720			
0.56		2440 - 2700			
0.60		2410 - 2670			
0.63		2390 - 2650			
0.65	2380 - 2640				
0.70	± 0.010	2360 - 2610	40	25	max. 100
0.75		2330 - 2580			
0.80	± 0.015	2310 - 2560			
0.85		2290 - 2530			
0.90		2270 - 2510			
0.95		2250 - 2490			
1.00		2230 - 2470			
1.05	± 0.020	2210 - 2450			
1.10		2200 - 2430			
1.20		2170 - 2400			
1.25		2150 - 2380			
1.30		2140 - 2370			
1.40		2110 - 2340			
1.50	± 0.025	2090 - 2310			
1.60		2060 - 2290			
1.70		2040 - 2260			
1.80		2020 - 2240			
1.90		2000 - 2220			
2.00		1980 - 2200			
2.10		1970 - 2180			
2.25		1940 - 2150			
2.40	± 0.030	1920 - 2130			
2.50		1900 - 2110			
2.60		1890 - 2100			
2.80		1860 - 2070			
3.00		1840 - 2040			
3.20		1820 - 2020			
3.40	± 0.035	1790 - 1990			
3.60		1770 - 1970			
3.80		1750 - 1950			
4.00		1740 - 1930			
4.25		1710 - 1900			
4.50		1690 - 1880			
4.75	-	1680 - 1860			
5.00		1660 - 1840			
5.30		1640 - 1820			
5.60		1620 - 1800			
6.00		1590 - 1770	35	10	max. 70

¹⁾ Out-of-roundness maximum 50 % of diameter tolerance.

²⁾ For intermediate wire diameters, the rating for the following diameters applies.