SADEVINOX Tensile strength (MPa) [abcdef] for stainless steel springwire

Nominal diameter mm [g]	302 / 1.4310				316 / 1.4401		17-7PH / 1.4568		304 / 1.4301			904L / 1.4539		45N / 1.4462			
	Normal tensile strength (NS) -		High tensile Strength (HS) -						Normal tensile strength (NS) -	High tensile strength (HS) -				Normal tensile strength (NS) -		High tensile strength (HS) -	
	min.	max.	min.	max.	min.	max.	min.	max.	min.	min.	max.	min.	max.	min.	max.	min.	max.
d ≤ 0,20	2200	2530	2350	2710	1725	1990	1975	2280	2000	2150	2300	1600	1840	2150	2480	2370	2730
0,20 < d ≤ 0,30	2150	2480	2300	2650	1700	1960	1950	2250	1975	2050	2280	1550	1790	2100	2420	2370	2730
0,30 < d ≤ 0,40	2100	2420	2250	2590	1675	1930	1925	2220	1925	2050	2220	1550	1790	2000	2300	2370	2730
0,40 < d ≤ 0,50	2050	2360	2200	2530	1650	1900	1900	2190	1900	1950	2190	1500	1750	2000	2300	2370	2730
0,50 < d ≤ 0,65	2000	2300	2150	2480	1625	1870	1850	2130	1850	1950	2130	1450	1670	1900	2190	2370	2730
0,65 < d ≤ 0,80	1950	2250	2100	2420	1600	1840	1825	2100	1800	1850	2070	1450	1670	1900	2190	2230	2570
0,80 < d ≤ 1,00	1900	2190	2050	2360	1575	1820	1800	2070	1775	1850	2050	1400	1610	1800	2070	2140	2470
1,00 < d ≤ 1,25	1850	2130	2000	2300	1550	1790	1750	2020	1725	1750	1990	1350	1560	1800	2070	2090	2410
1,25 < d ≤ 1,50	1800	2070	1950	2250	1500	1730	1700	1960	1675	1750	930	1350	1560	1700	1960	2090	2410
1,50 < d ≤ 1,75	1750	2020	1900	2190	1450	1670	1650	1900	1625	1650	870	1300	1500	1700	1960	2000	2300
1,75 < d ≤ 2,00	1700	1960	1850	2130	1400	1610	1600	1840	1575	1650	820	1300	1500	1700	1960	2000	2300
2,00 < d ≤ 2,50	1650	1900	1750	2020	1350	1560	1550	1790	1525	1550	760	1300	1500	1550	1790	1900	2190
2,50 < d ≤ 3,00	1600	1840	1700	1960	1300	1500	1500	1730	1475	1550	1700	1300	1500	1550	1790	1860	2140
3,00 < d ≤ 3,50	1550	1790	1650	1900	1250	1440	1450	1670	1425	1450	1640	1300	1500	1550	1790	—	—
3,50 < d ≤ 4,25	1500	1730	1600	1840	1225	1410	1400	1610	1400	1450	1610	1250	1440	1450	1670	—	—
4,25 < d ≤ 5,00	1450	1670	1550	1790	1200	1380	1350	1560	1350	1350	1560	1250	1440	1450	1670	—	—
5,00 < d ≤ 6,00	1400	1610	1500	1730	1150	1330	1300	1500	1300	1350	1500	1250	1440	1350	1560	—	—
6,00 < d ≤ 7,00	1350	1560	1450	1670	1125	1300	1250	1440	1250	1300	1440	1200	1380	1350	1560	—	—
7,00 < d ≤ 8,50	1300	1500	1400	1610	1075	1240	1250	1440	1200	1300	1380	1200	1330	—	—	—	—
8,50 < d ≤ 10,00	1250	1440	1350	1560	1050	1210	1250	1440	1175	1250	1360	—	—	—	—	—	—

a. Tensile strength calculated on actual diameter.
b. The range of tensile strength values within a production batch of the same heat shall be a maximum of 9 % of the minimum values in this table.
c. After straightening, it is recognized that the tensile strength may reduce by up to 10 % but the minimum values of this Table have to be fulfilled.
d. When better formability is required, lower tensile strength values may be agreed upon.
e. The wire is supplied in the cold drawn condition. The tensile strength in the finished spring may be substantially influenced by a heat treatment; particularly precipitation hardening of grade 17-7PH results in substantially higher tensile strength.
f. 1 MPa = 1 N/mm2.
g. Larger diameters may be specified in which case the parties shall agree the tensile strength at the time of enquiry and order.

NOTE 1 : Grade 302 and 45N can be delivered in normal tensile strength (NS) or high tensile strength (HS).

NOTE 2 : For steel 17-7PH the characteristics of the springs are not only determined by the characteristics of the drawn wire but also by the heat-treatment of the spring. Therefore the steel should be of such quality so that by the heat treatment after drawing the mechanical properties are met