

Sign	SWM-B	SWM-F	SWM-N	SWM-A	SWM-P	SWM-I, SWM-R		
7.50			-		11			
8.00 < $\Phi \leq 16.0$	320 ~880				-			
16.0 < $\Phi \leq 18.0$						-	-	-
Usage	general, wire mesh	post gilding, welding	nail	general, wire mesh	wire mesh, concrete reinforcing			

Low Carbon Steel Wire (JIS G3532) - Wire diameter tolerance

Diameter (mm)	SWM-B, SWM-F	SWM-A	SWM-P
$\Phi \leq 0.35$	$\pm 0.01\text{mm}$	$\pm 0.01\text{mm}$	-
$0.35 < \Phi \leq 0.80$	$\pm 0.02\text{mm}$	$\pm 0.02\text{mm}$	
$0.80 < \Phi \leq 2.00$	$\pm 0.03\text{mm}$	$\pm 0.04\text{mm}$	
$2.00 < \Phi \leq 2.90$	$\pm 0.04\text{mm}$	$\pm 0.06\text{mm}$	$\pm 0.06\text{mm}$
$2.90 < \Phi \leq 3.20$			$\pm 0.08\text{mm}$
$3.20 < \Phi \leq 4.00$	$\pm 0.05\text{mm}$	$\pm 0.08\text{mm}$	$\pm 0.10\text{mm}$
$4.00 < \Phi \leq 6.00$			$\pm 0.10\text{mm}$
$6.00 < \Phi$	$\pm 0.06\text{mm}$	$\pm 0.10\text{mm}$	$\pm 0.13\text{mm}$

Zinc-coated low carbon steel wire JIS G 3547	
* Zinc-coated . . . Zinc get rusted and saves the base material.	
Type	
Zinc-coated low carbon steel wire (S)	Low carbon steel rod is cold drawn and annealed, melting zinc-coated or electric zinc-coated and the dimension must be round-shaped. (SWMGS-1~SWMGS-7) (Wire-SWMGS-2)
Zinc-coated low carbon steel wire (H)	Low carbon steel rod is cold drawn, melting zinc-coated or electric zinc-coated and the dimension must be round-shaped.(SWMGH-1~SWMGH-4) (Hard drawn coated low carbon steel wire)

Zinc-coated steel wire JIS G 3548	
* Zinc-coated . . . Zinc get rusted and saves the base material.	
Type	
Zinc-coated steel wire (F)	Hard drawn steel wire is melting zinc-coated or electric zinc-coated and the dimension must be round-shaped.(SWGF-1~SWGF-6)
Zinc-coated steel wire (D)	Hard drawn steel wire is melting zinc-coated or electric zinc-coated and the dimension must be round-shaped.(SWGD-1~SWGD-3)

Hard drawn steel wire JIS G 3521		
Hard drawn steel wire is made by the special heat treatment and cold drawing process by using high quality high carbon steel wire rods. The usage of the hard drawn steel wire is mainly for the spring of wide general purpose.		
Type	Code	Size
Hard drawn steel wire A	SW-A	0.08mm 以上 10.0mm 以下
	After hard drawn steel wire (JIS G 3506) is heat treated(Patenting), it is cold-worked. Tensile strength is same as that of SW-A. Generally, it is 40C (SWRH37AorB~42AorB)	
Hard drawn steel wire B	SW-B	0.08mm 以上 13.0mm 以下
	Mainly for static load spring. After hard drawn steel wire (JIS G 3506) is heat treated(Patenting), it is cold-worked. Tensile strength is same as that of SW-B. Generally, it is 60C. (SWRH57AorB~62AorB)	
Hard drawn steel wire C	SW-C	0.08mm 以上 13.0mm 以下
	Mainly for static load spring. After hard drawn steel wire (JIS G 3506) is heat treated(Patenting), it is cold-worked. Tensile strength is same as that of SW-C. Generally, it is 80C. (SWRH77AorB~82AorB)	

Hard Drawn Steel Wires (JIS G3521)

Diameter(mm)	Tensile Strength(N/mm ²)		
	SW-A	SW-B	SW-C
0.60	1570 ~ 1810	1810 ~ 2110	2110 ~ 2400
0.65	1570 ~ 1810	1810 ~ 2110	2110 ~ 2400
0.70	1520 ~ 1770	1770 ~ 2060	2060 ~ 2350
0.80	1520 ~ 1770	1770 ~ 2010	2010 ~ 2300
0.90	1520 ~ 1770	1770 ~ 2010	2010 ~ 2260
1.00	1470 ~ 1720	1720 ~ 1960	1960 ~ 2210
1.20	1420 ~ 1670	1670 ~ 1910	1910 ~ 2160
1.40	1370 ~ 1620	1620 ~ 1860	1860 ~ 2110
1.60	1320 ~ 1570	1570 ~ 1810	1810 ~ 2060
1.80	1270 ~ 1520	1520 ~ 1770	1770 ~ 2010
2.00	1270 ~ 1470	1470 ~ 1720	1720 ~ 1960
2.30	1230 ~ 1420	1420 ~ 1670	1670 ~ 1910
2.60	1230 ~ 1420	1420 ~ 1670	1670 ~ 1910
2.90	1180 ~ 1370	1370 ~ 1620	1620 ~ 1860
3.20	1180 ~ 1370	1370 ~ 1570	1570 ~ 1810
3.50	1180 ~ 1370	1370 ~ 1570	1570 ~ 1770
4.00	1180 ~ 1370	1370 ~ 1570	1570 ~ 1770
4.50	1130 ~ 1320	1320 ~ 1520	1520 ~ 1720
5.00	1130 ~ 1320	1320 ~ 1520	1520 ~ 1720
5.50	1080 ~ 1270	1270 ~ 1470	1470 ~ 1670
6.00	1030 ~ 1230	1230 ~ 1420	1420 ~ 1620
6.50	1030 ~ 1230	1230 ~ 1420	1420 ~ 1620
7.00	980 ~ 1180	1180 ~ 1370	1370 ~ 1570

Piano Wires (JIS G3522)

Diameter(mm)	Tensile Strength(N/mm ²)	
	SWP-A	SWP-B
0.60	2210 ~ 2450	2450 ~ 2700
0.65	2210 ~ 2450	2450 ~ 2700
0.70	2160 ~ 2400	2400 ~ 2650
0.80	2110 ~ 2350	2350 ~ 2600
0.90	2110 ~ 2300	2300 ~ 2500
1.00	2060 ~ 2260	2260 ~ 2450
1.20	2010 ~ 2210	2210 ~ 2400
1.40	1960 ~ 2160	2160 ~ 2350
1.60	1910 ~ 2110	2110 ~ 2300
1.80	1860 ~ 2060	2060 ~ 2260
2.00	1810 ~ 2010	2010 ~ 2210
2.30	1770 ~ 1960	1960 ~ 2160
2.60	1770 ~ 1960	1960 ~ 2160
2.90	1720 ~ 1910	1910 ~ 2110

Stainless steel Wire
JIS G4309

Stainless steel is an iron-chrome or an iron-chrome-nickel alloy steel. It is defined as containing more than 5% chromium and 50% or higher iron content. However, those with 12% or higher chromium are usually called "stainless steel" in consideration of their heat resistance and corrosion resistance. Stainless steel is a type of steel whose surface will not be damaged easily through exposure to air, water or other corrosive environment

Typical Characteristics used in Wire

Type	Code	Material
Austenite Stainless Steel	SUS 304	(18Cr-8NiSteel)
	This is an exemplary steel grade of 18-8 stainless steel with higher resistance to corrosion and heat and higher mechanical properties compared with chrome stainless steel. Though nonmagnetic under solution heat treatment, it can be hardened and slightly magnetized through cold-working.	
	SUS 303	(18Cr-8Ni-High S Steel)
	This is an 18Cr-8Ni steel grade with improved processability and seize resistance, it is optimal for use in automatic lathes.	
	SUS 303Cu	(18Cr-8Ni-3Cu-High S Steel)
	This is an 18Cr-8Ni steel containing sulfur and copper. Austenite stainless steel has the highest processability and maintains its nonmagnetic property even after cold-working.	
	SUS XM7	(18Cr-9Ni-3.5Cu Steel)
	This is a grade of steel whose cold-working hardenability is controlled at a low level by reducing the carbon content through the addition of copper to 18Cr-8Ni steel, and is widely used for cold-heading. It can also maintain its nonmagnetic property even after cold working.	
	SUS 305J1	(18Cr-13Ni-Low C Steel)
	This is a grade of steel designed for cold heading. It has lower cold-working hardenability when compared with 18Cr-8Ni steel.	
	SUS 304L	(18Cr-9Ni-Extremely-lowC Steel)
	This is an 18Cr-8Ni steel with controlled carbon at extremely low level, offering superior intergranular corrosion resistance.	
	SUS 316	(18Cr-12Ni-2.5MoSteel)
	This type is extremely resistant to corrosion and acid, exceeding even that of 18Cr-8Ni steel.	
	SUS 316L	(18Cr-12Ni-2.5Mo-Extremely-low C Steel)
A molybdenum-added 18Cr-8Ni steel with controlled carbon at an extremely low level, it is used for applications that require resistance to corrosion, acid and intergranular corrosion.		
SUS 310S	(25Cr-20NiSteel)	
This type is durable with high-temperature oxidation, superior in heat resistance, and excellent in corrosion resistance.		
SUS 347	(18Cr-9Ni-Nb Steel)	
This is an 18Cr-8Ni steel containing niobium with excellent intergranular corrosion resistance.		

Stainless steel Wire JIS G4309		
Austenite: Ferrite Stainless Steel	SUS 294L	(25Cr-7Ni-3Mo-N-Low C Steel)
	This is a duplex steel type with high strength and superior acid resistance, as well as antibiotic resistance. It is suitable for applications that require seawater resistance.	
Ferrite Stainless Steel	SUS 430	(18Cr Steel)
	This is a grade of steel whose resistance to corrosion and heat resistance surpasses that of 13Cr steel. It is available at a lower price than the nickel containing austenite steel. It will not be hardened by quenching but provides a small degree of hardening under cold-working.	
	SUS 430F	(18Cr High S steel)
	This grade of steel has the highest processability among stainless steels and is suitable for machining with automatic lathe. Moreover, it has approximately the same corrosion resistance as 18Cr steel.	
Martensite Stainless Steel	SUS 410	(13Cr-0.1C Steel)
	This type is available at modest price compared with other stainless steels. But it offers less corrosion resistance compared with stainless steels of other microstructures. It is hardened by quenching, and the quenching hardness increases in proportion to the carbon content.	
	SUS 420J2	(13Cr-0.3C Steel)
	This is a grade of steel whose hardness after quenching is higher than that of 410 and 420J1	
	SUS 440C	(18Cr-1C Steel)
	This type can provide the highest quenching hardness among all stainless steel.	
Deposition Hardening Stainless Steel	SUS 631J1	(17Cr-8Ni-1Al Steel)
	This is a high-tensile stainless steel that can be precipitation-hardened after cold-working by adding aluminum. It demonstrates substantial magnetism at room temperature.	
Soft Wire	Soft1 (—W1)	
	After wire drawing, conduct solution heat treatment.	
	Soft2 (—W2)	
	Another light wire drawing will be performed after solution heat treatment for austenite, annealing for ferrite and martensite. (1/8H,1/4H)	
	1 / 2 H Hard (—W1 / 2 H)	
	After solution heat treatment, perform comparatively strong wire drawing.	
(Reference)	3 / 4 H Hard (—W3 / 4 H)	
	After solution heat treatment, perform comparatively strong wire drawing.	
	Half Soft Wire (—WM)	
	After solution heat treatment, perform comparatively strong wire drawing to be in the mid tensile strength of W1 and W1/2H. This is Suzuki's original wire.	
Free-Cutting Stainless Steel	SUS 303F,SUS 303Cu,SUS 430F,SUS 416	
Stick Friction Stainless Steel	SUS 304,SUS 304N1,YUS 130,SUS 420J2	
Stainless steel Wire for Netting	Stainless steel netting is mainly used for conveyor belt for chemical, oil etc. The most important for this material is anti-erosion and heat-resistance. Generally, SUS304 and SUS316 are most used for this application.	
	316J1L、317、NAS 30M	
	This includes molybdenum and copper with improving anti-erosion.	

Stainless steel Wire JIS G4309	
	304L、316L、316J1L、317L
	This lowers the carbon with improving anti-erosion.
	321347
	This adds titanium and niobium with improving anti-erosion.
	NAS 64
	Anti-pitting corrosion for sea water.
	NAS 126
	Anti-stress corrosion cracking for chloride.
Stainless steel Wire for Screw	SUS 304,SUS 305J1,SUS 305J1E H,SUS 316,SUS XM7,SUS XM7E H,SUS 430,SUS 434,YUS 180,SUS 410
Stainless steel Wire for Cold Forging	This standard was enacted as a part of JISG4309 in 1972. This standard regulates screws for cold forging. SUS304 SUS304L SUS304J3 SUS305 SUS305J1 SUS316 SUS316L SUS384 SUSXM7 SUH660 all of these are austenite SUS430 SUS434 ferrite SUS403 SUS410 martensite
Screw Stainless Steel	SUS 304,SUS 305J1,SUS 305J1E H,SUS 316,SUS XM7,SUS XM7E H,SUS 430,SUS 434,YUS 180,SUS 410
(Reference) What is Stainless Steel?	
Stainless steel is an alloy steel that consist of iron and chrome or iron, chrome, and nickel. It is regulated to includes more than 10.5% of chrome and iron content should be under 50%. Generally, we call stainless steel as a perspective from anti-heat and anti-erosion. Stainless steel is difficult to be corroded even in corrosive environment like in the air and even in the water.	
(Reference) Stainless Steel Anti-Corrosion	
The term "rusting" refers to a phenomenon in which metallic surface corrodes through complex chemical actions. However, this is not necessarily an absolute chacteristic. For example, a metalli surface may not corrode under a paticular environment but may corrode under different environment. Therefore, it becomes necessary to select the right application suitable for its properties. Ordinary steel will rust when left eposed to the air. This is because steel is oxidized by the moisture and the oxygen in the air. When chromium is gradually added to steel, the resulting material will hardly rust if the chromium level is higher than 12% or so. However, when looking closely at the phenomenon, a thin oxide membrance is being formed on the surface. This film is very tough and adheres firmly to the steel, thereby preventing the progress of oxidation. Even if it is peeled off for one reason or another, a new identical fim is generated immedeiatly to over the surface.	