



# WALCOOM

Walcoom Corporation



# STEEL WIRE

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## "Walcoom is a trustworthy supplier can offer various materials of steel wires to customers as hanging wire, binding wire or materials of crafts."

For over 20 years, Walcoom Corporation has provided various types of steel wires for customers to used in the construction industry, power engineering and many other industries as binding wires or materials. We also have many beautiful steel wires that can be used to decorate house and make crafts. We have precision machine, high quality materials, professional teams and adequate experience to provide the high quality steel wires products and services.



**Steel wire** is a kind of multifunctional wire. It can be made of carbon steel, stainless steel, copper, aluminum and other materials. High strength materials make it can withstand heavy things as hanging wire without damaged. We also have different types of steel wire, such as, coil wire, U type wire and straight cut wire. You can choose suitable one depends on your use. If you buy it as binding wire, you can choose coil wire, straight cut wire or others. In addition, we also have different surface treatments. These make steel wire is not easy to be corroded although in the bad environments.

### Features

- High strength, high bearing capacity.
- Corrosion resistance, rust resistance.
- High tensile strength, high elongation.
- Good softness and flexibility, can be bent to various shapes.
- Electrical conductivity.
- It is convenient to use.
- Various types and specifications.

## Package

- Steel wire coils can be packed with plastic bags and then packed with woven bag.
- Steel wire coils and straight cut wires can be packed in box.



1. Steel wire coils in plastic bag.



2. Steel wire coils in woven bag.



3. PVC coated wire coils in box.



4. Straight cut wires in box.

## Application

### Steel wire can be used in:

- Hanging wire.
- Binding wire.
- Spring wire.
- Fence.
- Wire mesh.
- Filter screen.
- Window screening.
- Crafts.
- Power transmission line.
- Power engineering.
- Nails.
- Basket.
- Cages.



Stainless steel wire mesh.



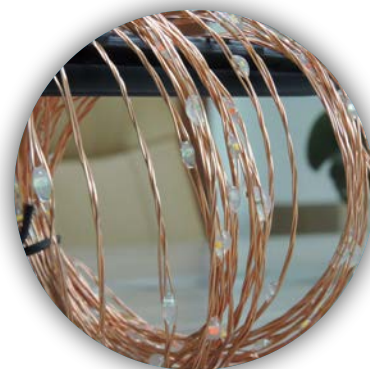
Copper wires as filter screen.



Galvanized wires in fence.



Galfan wires as gabion basket.



Copper wires in hanging lights.



Stainless steel wire as clothes hanger.



Steel wire as crafts.



Brass wires as baskets.



Stainless steel wires in power transmission lines



Black iron wire as binding wire.

## Galvanized wire

Galvanized wire is made of mild steel wire or high carbon steel wire. High strength materials make it can load heavy things without damaged. And galvanized can make it has good corrosion resistance. So it has a long service life although under the bad environment. In addition, steel wire also has good softness. It can be bent to various types to meet different needs. And our products meet the requirements of international standards. You can use it without any worries.

We provide various types and sizes of galvanized wires for customers to choose.



## Specification

- **Material:** Mild steel wire, high carbon steel wire.
- **Surface treatment:** Hot dipped galvanized, electro galvanized.
- **Wire diameter:** 0.20–9 mm.
- **Zinc coat:** 10–25 g/m<sup>2</sup>.
- **Tensile strength:** 40–85 kg/mm<sup>2</sup>.
- **Standard:** A411-08, ASTM B498, ISO 7989-2.
- **Type:**



Coil galvanized wire.



U type wire.



Straight cut wire.



Double loop wire ties.



Single loop bale ties.



Cotton bale tie wire.

**Table 1: Common Specifications of Hot Dipped Galvanized Wire**

Serial Number	Size	Diameter (mm)	Standard Bundle Weight (Kg)
1	8#	4.0	50
2	10#	3.5	50
3	12#	2.8	50
4	14#	2.2	50
5	16#	1.6	50.25
6	18#	1.2	25
7	20#	0.9	25
8	22#	0.7	10–25

## Galfan wire



Galfan wire is made of carbon steel or iron. Its surface treatment is special. Galfan wire is coated by the 5% aluminum and 95% zinc. This kind of surface treatment makes it enhanced corrosion resistance greatly. So it is widely made into gabion baskets used in river bank. The surface treatment also make it has smooth and shiny surface. Galfan wire with high elongation strength is not easy to be broken. And galfan wire with good softness and flexibility can be bent into various shapes to meet different needs. Just like galvanized wires, it also has high bearing capacity.

## Specification

- **Material:** Carbon steel wire, iron wire.
- **Surface treatment:** 5% aluminum and 95% zinc coated (galfan coated).
- **Wire diameter:** 1.24–5.5 mm.
- **Tensile strength:** 1290–1340 MPa.
- **Package:** Galfan wire spool or coil is wrapped with moisture-proof paper or plastic film.

## Black iron wire

Black iron wire is a common used wire in our life. Black iron wire is made of high quality iron or steel. So black iron wire with high strength can be used to hang some heavy things. And our products with high tensile and elongation strength are not easy to be broken when using it. Compared with galvanized wire, black iron wire has poor corrosion resistance. But it cost less. We have two kinds of black iron wires. One is hard drawn wire, another is soft annealed wire. We can control the hardness of black iron wire during the annealing process. You can choose suitable one depends on your use.



## Specification

### • Hard drawn wire.

- **Material:** Iron wire, steel wire.
- **Wire diameter:** 0.8–4 mm.
- **Wire gauge:** BWG 8# to 23#.
- **Tensile strength:** 500–980 N/mm<sup>2</sup>.

### • Soft annealed wire

- **Material:** Steel wire.
- **Wire gauge:** BWG 16#, 18#, 19#, 20#, 22# are the most popular sizes.
- **Type:** Black soft annealed wire, bright soft annealed wire.



Black soft annealed wire.



Bright soft annealed wire.

Table 2: Common Specifications of Black Iron Wire

Wire Gauge	SWG (mm)	BWG (mm)	Metric System (mm)
8#	4.06	4.19	4.00
9#	3.66	3.76	
10#	3.25	3.40	3.50
11#	2.95	3.05	3.00
12#	2.64	2.77	2.80
13#	2.34	2.41	2.50
14#	2.03	2.11	
15#	1.83	1.83	1.80
16#	1.63	1.65	1.65
17#	1.42	1.47	1.40
18#	1.22	1.25	1.20
19#	1.02	1.07	1.00
20#	0.91	0.89	0.90
21#	0.81	0.813	0.80
22#	0.71	0.711	0.70

## PVC coated wire



PVC coated wire is made of galvanized wire or black iron wire. PVC coated offers better corrosion resistance than the galvanized wire. Of course, its price is also higher than galvanized wire. PVC coated has excellent temperature resistance. It will not be broken in the low temperature. And the PVC coating will not fade under the sun exposure. PVC coated wire with excellent flexibility and softness can be used to make barbed wire, chain link fence, chicken wire fence, woven gabion baskets, close hanger, baskets and other things.

We provides various types and colors of PVC coated wires for customers to choose.

## Specification

- **Material:** Galvanized wire, black iron wire.
- **Surface treatment:** PVC coated.
- **Wire diameter:**
  - **Core diameter:** 0.6–4.0 mm.
  - **Outside diameter:** 0.9–5.0 mm.
- **PVC coating density:** Less than 1.5 g/cm<sup>3</sup>.
- **Tensile strength:** 30–75 kg/mm<sup>2</sup>.
- **Color:** Black, white, green, blue, yellow orange, red and so on.
- **Type:** Coil PVC coated wire, U type PVC coated wire, straight cut PVC coated wire.
- **Standard:** BS EN 10245-2.

## Stainless steel wire

Stainless steel wires are various types and specifications wires that are made of stainless steel. Stainless steel material make it not easy to be corroded by acid and alkali in the bad environment. And stainless steel wire with good temperature resistance can withstand the temperatures up to 1100 °C. Stainless steel wire has smaller diameter than PVC coated wire, but it still can withstand the great weight without broken. Stainless steel wire has bright and smooth surface. In addition, stainless steel wire with excellent softness can be made into binding wire, hanging wire, barbed wire, chain link fence, chicken wire , wire baskets, fan guards, window screen and so on.



## Specification

- **Material:** 304, 304L, 316, 316L stainless steel wire.
- **Wire diameter:** 0.020–0.9 mm.
- **Standard:** ASTM A555, ASTM A493-16, A581M.

**Table 3: Chemical Composition of Stainless Steel Wire**

AISI Grade	Chemical Composition							
	C	Si	Mn	P	S	Ni	Cr	Mo
304	≥ 0.08%	≥ 1.00%	≥2.00%	≥ 0.045%	≥ 0.030%	> 8.00%–10.50%	> 18.00%–20.00%	
304H	> 0.08%	1.00%	2.00%	0.045%	0.030%	8.00%–10.50%	18.00%–20.00%	
304L	≥ 0.030%	≥ 1.00%	≥2.00%	≥ 0.045%	≥ 0.030%	> 9.00%–13.50%	> 18.00%–20.00%	
316	0.045%	1.00%	2.00%	0.045%	0.030%	10.00%–14.00%	10.00%–18.00%	2.00%–3.00%
316L	≥ 0.030%	≥ 1.00%	≥2.00%	≥ 0.045%	≥ 0.030%	> 12.00%–15.00%	> 16.00%–18.00%	> 2.00%–3.00%
430	0.12%	0.75%	1.00%	0.040%	0.030%	0.60%	16.00%–18.00%	
430A	≥ 0.06%	≥0.50%	≥ 0.50%	≥ 0.030%	≥ 0.50%	= 0.25%	> 14.00%–17.00%	

Table 4: Sizes of Stainless Steel Wire

Wire Diameter	Tolerance (mm)	Max. Deviation Tolerance (mm)
0.020–0.049	+0.002/-0.001	0.001
0.050–0.074	±0.002	0.002
0.075–0.089	±0.002	0.002
0.090–0.109	+0.003/-0.002	0.002
0.110–0.169	±0.003	0.003
0.170–0.184	±0.004	0.004
0.185–0.199	±0.004	0.004
0.200–0.299	±0.005	0.005
0.300–0.310	±0.006	0.006
0.320–0.499	±0.006	0.006

## Copper wire



Copper wire is made of copper. And it also can be copper plated. Compared with black iron wire, copper wire has beautiful appearance. So it is widely used to decorate house and garden, make crafts and jewelry. Copper wire with good electrical conductivity also can be used in power engineering.

Copper wire with corrosion resistance is not easy to be corroded by chemical material in the bad environment. In addition, copper wire has high plasticity. It can be bent into various shapes. Just like other steel wires, copper wire also has high bearing capacity. It can be used for making hanging wire, chicken wire, window screen, copper wire cloth, copper knitted mesh, wire basket. We offer various sizes of copper wire for customers to choose.

## Specification

- **Material:** Copper.
- **Surface treatment:** Plated copper.
- **Gauge:** 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32.
- **Standard:** BS EN 12166, ASTM B246-15, ASTM B197.

## Brass wire



Brass wire is made of brass that contains 65 percent of copper and 35 percent zinc. Our brass wire has bright and beautiful surface. And it doesn't fade. So it is a good material to make jewelry and crafts. And many people like using it to hang some lights and pictures to decorate house. Brass wire also has good corrosion and wear

resistance. It can be used in construction and transport industry for binding. Just like copper wire, brass wire also has good electrical conductivity. It also can be used in power transmission line and power engineering, and making for window screen, and decorative mesh. We have various specifications of brass wires for customers to choose.

## Specification

- **Material:** Brass wire, phosphor bronze wire, copper wire.
- **Surface treatment:** Plated brass.
- **Wire diameter:** 0.15, 0.20, 0.25, 0.30 mm. Other sizes can be customized.
- **The shape of the cross section:** Hexagonal, square or round.
- **Standard:** ASTM B134, ASTM B974.

## Aluminum wire



Aluminum wire is a kind of popular wire that used in construction, decoration, crafts and other industries. It is made of high strength aluminum. So it can be used as hanging wire to hang lights, jewelry and so on. Aluminum wire also has good electrical conductivity. So it also can be used in power transmission liner in the power engineering.

We also have anodized aluminum wires. Anodized make it has better corrosion resistance. And anodized also make it has different colors. So many people like to use anodized aluminum wires to decorate house and make crafts.

## Specification

- **Material:** Aluminum.
- **Surface treatment:** Anodized.
- **Wire diameter:** 0.15–0.28 mm.
- **Color:** Silver, blue, orange, purple, gold, brown and so on.



Silver aluminum wire.



Blue aluminum wire.



Orange aluminum wire.



Purple aluminum wire.



Gold aluminum wire.



Brown aluminum wire.

## Spring wire

Spring wire is a kind of steel wire. It can be made of different materials covering galvanized wire, black iron wire, stainless steel wire and aluminum wire. The high strength materials make spring wire is not easy to be broken in the process of using it. All of the materials of spring wires with good corrosion resistance will not to be corroded, when using in the machine and chemical industry. In addition, Spring wire has good elongation strength and elasticity. So it is widely used as pull rope without damaged and deformed. We provide various spring wire for you to choose.



## Specification

- **Material:** Galvanized wire, black iron wire, PVC coated wire, stainless steel wire, Aluminum wire.
- **Wire diameter:** 0.14–5 mm.

## Binding wire

Binding wire is a special kind of steel wire. It can be made of steel, stainless steel, aluminum and other various materials. These high strength materials make it can tie something closely without loose. Binding wire with good corrosion resistance is not easy to be corroded by chemical material and moist air. The coil binding wire can be cut into any length according to your needs. We also have U type wire, cut straight wire and loop wire ties. These binding wires are convenient for you to use without any cut. We provide various types of binding wires for you to choose, black wire, galvanized wire and PVC coated wire all available. You can choose any one you want.



## Specification

- **Material:** Steel, stainless steel, iron, copper, aluminum, brass.
- **Surface treatment:** Galvanized, PVC coated.
- **Wire diameter:** 0.1–5 mm.
- **Type:**



Coil binding wire.



U type binding wire.



Binding straight cut wire.



Binding double loop wire.



Single loop-bale ties.



Cotton bale tie wire.

# STEEL WIRE

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