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What is Chain Link Fabric?

Fabric comes in a variety of gauges. Gauge is the diameter of the wire; the higher the gauge number the smaller the wire diameter. Standard mill diameter tolerance is + or - .005? Common gauges and diameters are as follows:

- 6 gauge=.192
- 9 gauge=.148
- 11 gauge=.120
- 11 gauge=.113
- 12 gauge=.106
- 12 gauge=.099

Chain link fabric is available in heights of 36 42 48 60 72 84 96 120 and 144 The fabric is formed by weaving a series of spirals together. How the top and bottom of fence is finished is referred to as the selvage. Fences less than 72" must knuckle both ends by industry standard (KK). Heights of 72 and higher, are generally twisted or barbed at one end and knuckled (BK) on the other. For high security enclosures, chain link can be obtained with both ends twisted or barbed (BB).

Zinc coatings may also differ. There are two different processes for applying zinc to wire. Galvanized after weaving (G.A.W.) is a process in which wire rod is drawn to the finished gauge, then woven into chain link fabric. The fabric is then pulled through a pot of molten zinc. This process applies 1.2 ounces of zinc coating per square foot of fabric and conforms to ASTM standards.

The other process for applying zinc coating to chain link is called galvanized before weaving (G.B.W.). In this process the wire rod is drawn to gauge, and the strand wire is then pulled through a pot of molten zinc. The wire is then woven into chain link fabric. Generally chain link fabric made using this process carries a zinc weight of .8 ounces per square foot or less.

The distance between two parallel wires in the fabric is referred to as the mesh size. The most common mesh sizes are 2 or 2 , but smaller meshes of 3/8 5/8 1 1 , 1 and 1 are available for projects that require a higher degree of security.

The quality of chain link fence fabric is determined by both the gauge of the wire and the weight of the

zinc coating applied to the wire. The American Society for testing material has established standards for residential and commercial chain link fence fabric under designation A 392-96.

What is Frame Work?

Frame work is the tubular steel frame that chain link fabric is attached to. The frame work is comprised of three components; top rail, line posts, and terminal posts. Terminal posts are set in concrete and are end, corner, and gate posts. Line posts are smaller in diameter than terminal posts and are the intermediate posts between terminal posts. These should also be set in concrete. The top rail is attached to the terminal posts and passes through fittings which are attached to line posts. This provides a horizontal frame that supports that fabric.

The chain link fence frame work is also zinc coated to provide protection against corrosion. There are two methods of coating tubular products. In the first method, coils of steel are slit to the proper width, then formed into pipe and the seam is welded. After the pipe is formed, the pipe is then taken to a pot of molten zinc and submersed. Both the interior and exterior of the pipe are zinc coated. This method is referred to as the hot dip process.

In the second method, the slit to width coil of steel is formed into pipe and then seam welded. The pipe then passes through an in line vat of molten zinc, which coats the exterior with zinc. A clear organic coating is applied over the zinc, providing additional protection from corrosion. The interior of the tubing is coated with a zinc rich paint. This method is referred to as in line, flow coat galvanizing.

Both methods of manufacturing conform to ASTM F669-92. The quality of tubular products is relative to the thickness of steel, as well as the zinc coating. Please refer to chart one for further information on tubular products and typical applications.

What are fittings and how are they used?

To assemble a chain link fence systems several types of fittings are required. YiHang first started as a fitting manufacturer and still takes pride in the quality of fittings produced. Fittings can be classified into three types; those used in the line of fence, those used on terminal posts, and those used in conjunction with gates. All residential fittings are made from a die cast aluminum or steel that has been galvanized. Industrial and commercial fittings are made from galvanized steel, cast iron, or malleable steel. Fittings are an integral part of the fence, as they secure the components of the fence system. Gate fittings are especially important. The gate is the only part of the fence that moves and that people come into contact with on a regular basis. It is very important that they fit and do not move on the gate post once installed. This will keep the gate from sagging. For security, barbed wire can be added to all types of commercial projects. Fittings should conform to ASTM F 626-96.

What types of residential gates are available?

For residential applications two types of gates are commonly used; single walk and double drive. Single walk gates are generally used for people to pass through, although they can be made up to 12 wide and

are always the same height as the fence. It is a single panel that is hinged from one terminal post and latched to another. Double drive gates consist of two panels that latch in the middle of the opening. Both single walk and double drive gates for residential enclosures are made from 1 3/8 diameter tubing. Bent frames with rounded corners, aluminum ell corners, and square welded corners are also available. The quality of the chain link and frame work used should match the rest of the fence. Automatic closing mechanisms are available to shut and latch the single walk gate after passage.

Are there different types of gates for commercial projects?

In addition to single walk and double drive gates, several types of sliding gates are available for commercial and high security applications. Sliding gates are used where there is no room to swing the panel of a single or double gate. In areas where snow and ice are not a problem rolling gates are not recommended. Rolling gates roll on a pipe track that is attached by track brackets to the gate post and line posts and is on a ground carrier that is attached to the front of the gate. Sliding gates are made from 1 5/8 or 1 7/8 diameter frame work. For security, barbed wire or barbed tape can be added to all types of gates.

Commercial single and double drive gates are usually welded, but can also be made with gate ells.

In area where snow and ice are a problem cantilever gates a generally used. A cantilever gate is 1.5 times the length of the gate opening and is suspended by four malleable rollers, which are attached to two posts. Rollers are attached to the gate and first line post, one at the top and one at the bottom of each post; this allows the gate frame to slide between the rollers. Cantilever gates are very heavy and are usually installed on 4" diameter posts and constructed from a 2-3/8" diameter top and bottom rail.

We also handle a complete line of residential and commercial gate operators that can be used with any of the gates mentioned.

Are chain link fence systems available in Colors?

YiHang offers two different types of color systems. First, we have our Spectra product line. It is the perfect choice for property owners who need a fence that delivers the strength of chain-link, but desire a fence that blends beautifully with the environment. Spectra represents the ideal choice for a fence that does it all. No other fence provides as much security, lasts as long, or safeguards the beauty of your home and its surroundings quite like Spectra. This product is available in forest green, midnight black, and sierra brown.

YiHang produces chain-link fabric with a tough polyvinyl over a galvanized steel core wire. We produce wire that has 95,000 P.S.I. breaking strength, which is unique in that most other manufacturers only have wire with a breaking strength of 75,000 P.S.I. The wire has a .15 ounce per square foot zinc coating, which is then coated with 20 mils of polyvinyl.

Spectra framework is our galvanized framework that has a 3 mil polyester powder coating on it, giving double protection from the elements and corrosion. The framework is prepared for coating by going

through a six stage chemical conversion process. It is then electrostatically powder coated and thermally bonded at 450 degrees to provide a superior color coating.

Permafused II is for commercial applications with an interest in beauty. Permafused II provides the protection, security, and durability that is expected from quality chain link fences, but adds good looks. No other fence combines utility with aesthetic luxury like Permafused II available in forest green, olive green, midnight black, sierra brown, and tan.

YiHang's Permafused II combines a tough polyolefin coating over galvanized steel, which results in a fence that will withstand harsh elements, as well as provide maximum security and protection.

Our Permafused II chain-link fabric used in Permafused II systems is .148" steel core wire with a minimum of .30 ounces per square foot of zinc; over which 6-10 mils of polyolefin is applied to the wire. The wire conforms to ASTM F 668-99a Class 2b. Permafused II framework has 10-14 mils of polyolefin coating and conforms to ASTM F 1043.

How expensive are chain link fence systems?

Although prices vary from one area to another, some typical system price ranges are as follows:

- 4 high residential galvanized fence system-\$3.50 to \$5.00 per lineal foot
- 6 high commercial galvanized fence systems-\$10.00 to \$12.00 per lineal foot
- 4 high residential color systems-\$6.50 to \$8.00 per lineal foot
- 6 high commercial color systems-\$13.00 to \$15.00 per lineal foot